ComputorEdge™ Online — 07/19/13

This issue:
Google Fiber, Google Loon, Super Glass and More!

Rare Earth Minerals; Consumers Driving Development of Healthier Products; Rivalries among Tech Giants as They Expand into New Realms; Could You Die for High Tech Secrets or "Means-well" Actions?; Google Fiber and Google Loon; E-Book News; Law Enforcement Tech; Other Programs for Wider and Cheaper Internet Access; Family Tech; Wireless Broadband Innovation; Super Glass.

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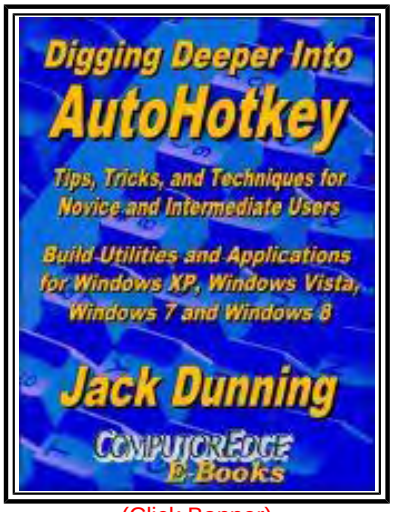

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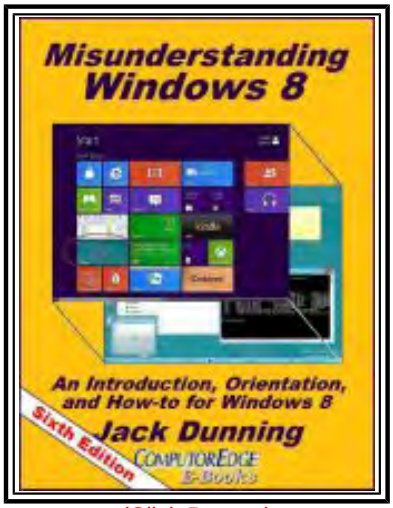

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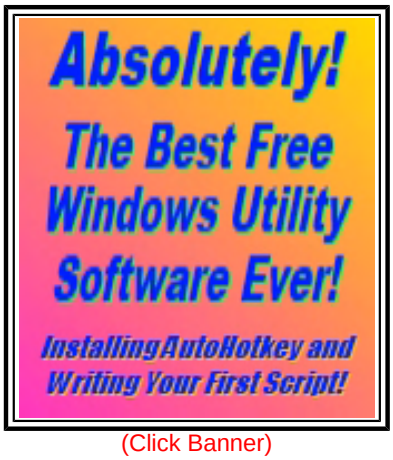

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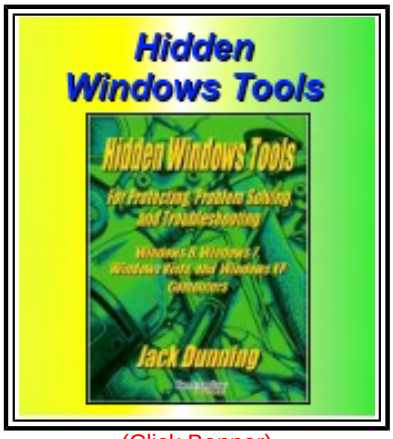

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Digital Dave

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

Antivirus Programs; Home Checkbook Software; Lost New Folder Creation in Windows 7.

Dear Digital Dave,

I have Malwarebytes Pro running on my Windows 7 computer and I just found out that I need an antivirus program as well. What would be a good free one to start with? I have had over the years AVG, Kaspersky, and ones like that…any thoughts?

Howard Pray
El Cajon, CA

Dear Howard,

Your antivirus software is only as good as the latest strain of malware. It seems that the top rated programs are in constant flux. Not too long ago, Microsoft Security Essentials (*windows.microsoft.com/en-us/windows/security-essentials-download*) (which is what I use) was hammered in some testing. The problem with any testing is that it could all be turned upside down in a couple of months as the software and the viruses continually evolve. What is more critical than which antivirus program you use is how you practice safe computing.

Note that 95% or more of all malware infections are the result of user carelessness or error. Taking proper precautions when downloading software, reading e-mail, and surfing the Web is most important. None of the antivirus programs are 100% effective and I expect that the relative rankings will continually vary. People should use the program that makes them feel the most comfortable while not annoying them too much. Some anti-malware programs are so aggressive that they often identify false positives.

What I like about Security Essentials is that I never get messages trying to make me upgrade to a paid version.

It may be worth the time to read some of the latest reviews (*www.techsupportalert.com/best-free-anti-virus-software.htm*), although every time I check, the reviews seem to highlight the same packages (AVG, Avast!, Avira, etc.).

Digital Dave

Dear Digital Dave,

I've used QuickBooks Pro since it first came out. Now Windows 7 will not install the older version I own. Is there another choice? I don't want to spend hundreds of dollars on a program just to handle the home checkbook.

As in the past, I have always appreciated your solutions and helpful instructions.

CAS
EL Cajon

Dear CAS,

If all you want to do is maintain your checkbook and personal accounts, then you certainly don't need QuickBooks (*www.amazon.com/QuickBooks-Intuit-Software/b/?_encoding=UTF8&camp=1789&creative=390957&linkCode=ur2&node=376886011&tag=comput0b9-20*) which is for business and double entry bookkeeping. While it is an excellent program for small business and is commonly used, QuickBooks has much more power (and a higher price) than you probably need.

Also from Intuit for personal use is Quicken (*www.amazon.com/gp/product/B008S0IMCC/ref=as_li_ss_tl?ie=UTF8&camp=1789&creative=390957&creativeASIN=B008S0IMCC&linkCode=as2&tag=comput0b9-20*), which is considerably less expensive. It will maintain your checkbook and other accounts (automatically downloads account data from the Internet) while reminding you of bills and helping with tax accounting. Quicken is not the only commercial option and I expect that other readers can recommend the software that they use.

Intuit also owns a free Web based personal finance service called Mint.com (*mint.com*). The advantage to this system is you should be able to access it from anywhere on any platform. On the downside, you will be giving your personal information to a third-party, Intuit, although I'm sure that they have put in place a ton of safeguards…and promises. Plus, Mint.com will always be a limited services (that's if they don't start charging) since Intuit's primary objective is to upsell you to Quicken, QuickBooks and TurboTax.

If you are looking for free software, which is often as good as any commercial package, then check out SourceForge, which is a repository of Open Source software. There is an extensive list of personal finance programs (*sourceforge.net/directory/business-enterprise/financial/personalfinance/os:windows/freshness:recently-updated/*). While I haven't tried any of these myself, check the ratings and test as many as you like. After all, it's free.

Digital Dave

Dear Digital Dave,

I have lost the ability to create a new folder. Clicking the right mouse button shows a menu which has "Briefcase" but no "Folder" selection. When in Windows Explorer the new folder button at the top of the frame has no effect. I attempted to restore to a previous date, but there were no selections available. I had made a restore point previously, but I assume the most recent upgrade deleted it. How can I restore this function to my system? I am using a Dell Inspiron 620 running 64 bit Windows 7 Home Premium with SP1. Thank you for any assistance you can provide.

Craig Williams
Arvada, CO

Dear Craig,

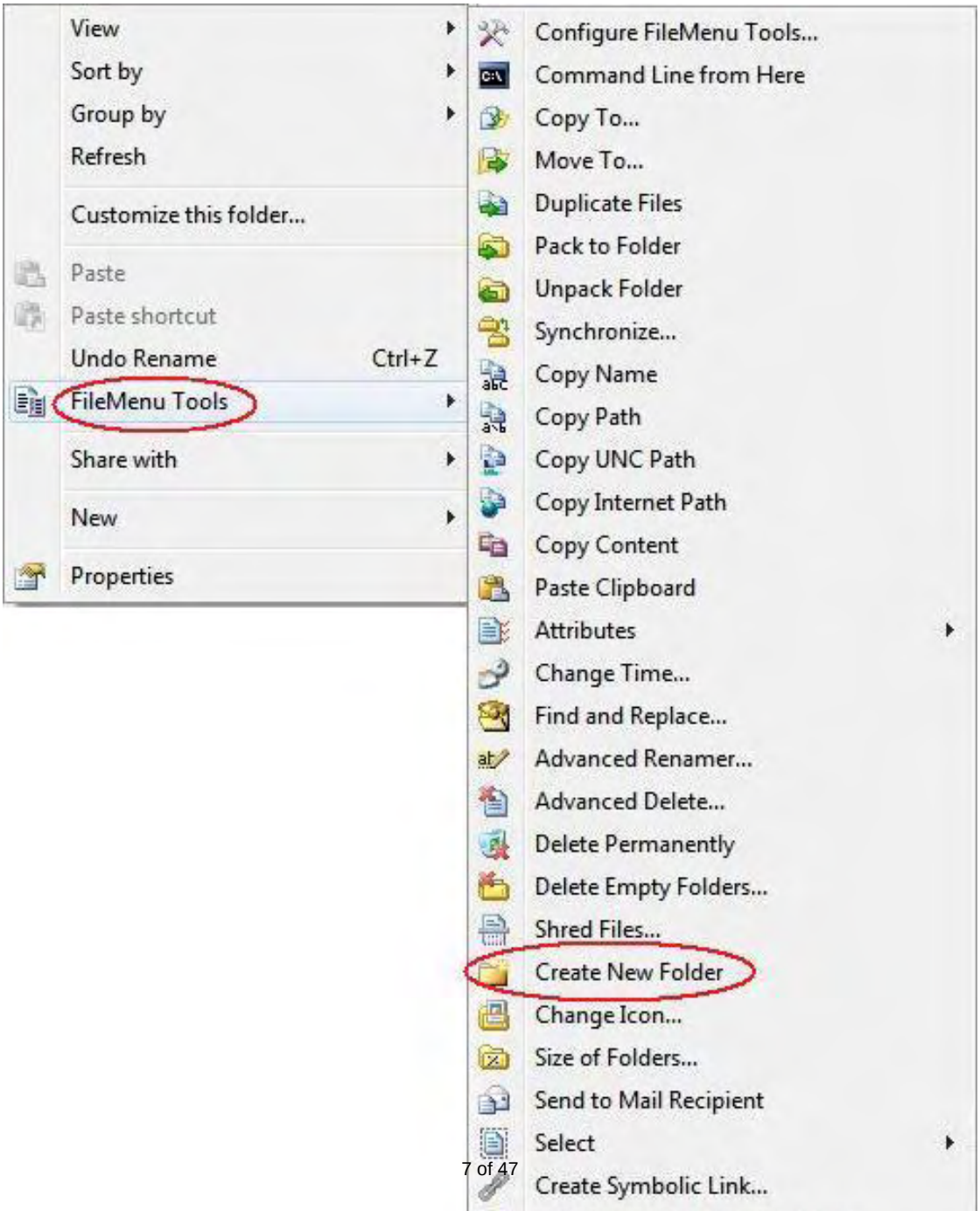
It seems that your computer may have experienced some sort of corruption to the system files and/or the Registry. The first thing you should try is System File Checker (*support.microsoft.com/kb/929833*) (*sfc.exe*). This program is designed to verify and repair any system files found to be corrupted.

To run SFC open the Run dialogue window (+R) and enter "sfc /scannow" (without the quotes) and click OK. The Command Prompt window will open and start scanning your system. SFC will fix any problems it finds. However, the Command Prompt window will close automatically when the program

completes it work. If you want to view the final results open the Command Prompt first (Start => All Programs => Accessories => Command Prompt), then enter "sfc /scannow" (without the quotes) into the Command Prompt window and hit Enter.

If this first step doesn't resolve the issue, then fixes will need to be applied to the Windows Registry. This Microsoft answer (*answers.microsoft.com/en-us/windows/forum/windows_7-performance/i-have-lost-the-ability-to-create-new-folders-in/997495ab-7bf1-428b-96f5-61bcd352cb5e*) gives the steps required to apply the proper fixes. While it is possible to apply these fixes with RegEdit, I would not recommend that because the lines of codes are fairly cryptic. It's best to copy-and-paste the lines per the instructions into a REG file which will directly change the Registry. This should restore your New => Folder options and clean up other problems.

A third option is a free third-party tool called FileMenu Tools (*download.cnet.com/FileMenu-Tools/3000-2094_4-10810545.html*). It adds another item to the right-click menu which may include New Folder (see Figure 1). (*Caution: If you do download the program from CNET, be sure to use the "Direct Download Link" link just below the big green "Download Now" button. Otherwise, the installer will try to install other programs.*)



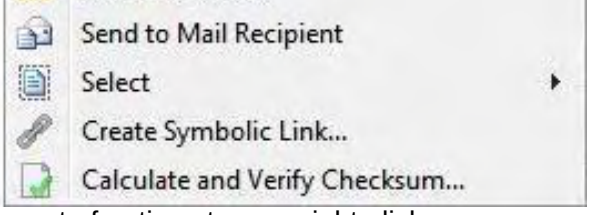


Figure 1. FileMenu Tools adds a new set of options to your right-click menu.

Once installed FileMenu Tools is easy to use. Check only those boxes which you want to appear in your right-click menu under FileMenu Tools (see Figure 2).

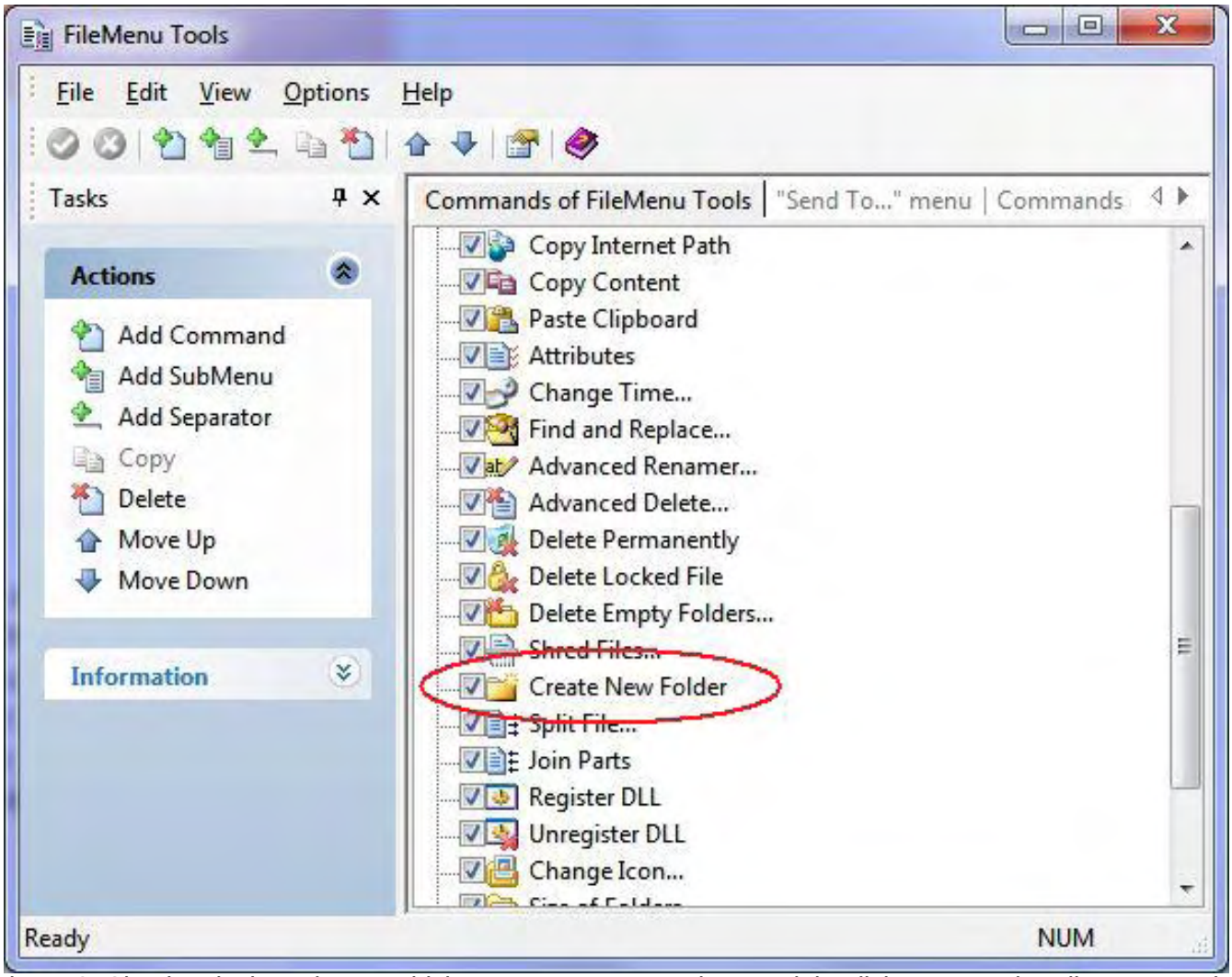


Figure 2. Check only those boxes which you want to appear in your right-click menu under FileMenu Tools.

Hopefully, you'll restore full functionality of your right-click menu without needing FileMenu Tools, although you may find the free app useful for other reasons.

Digital Dave

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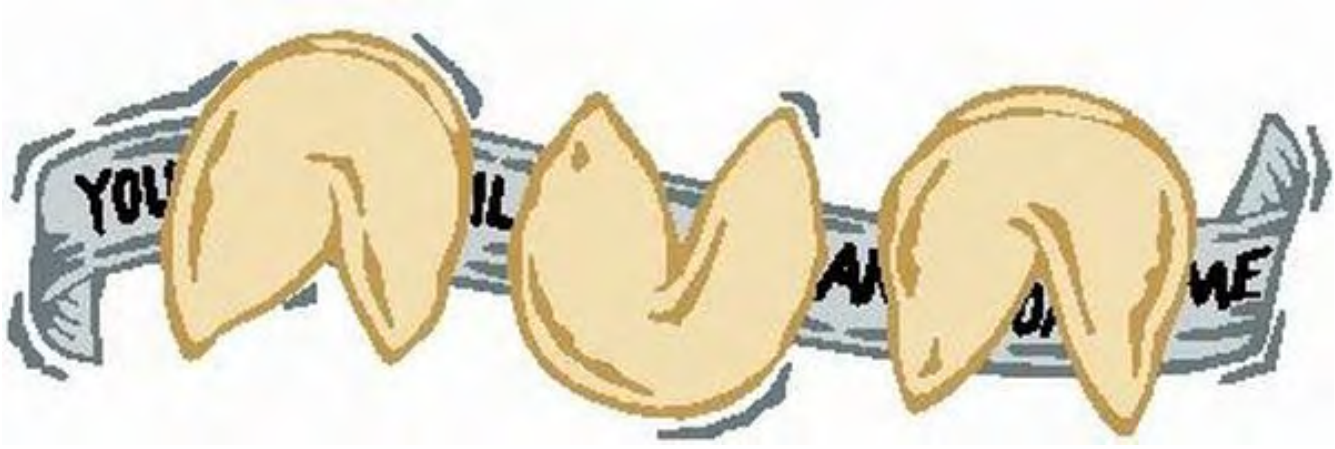


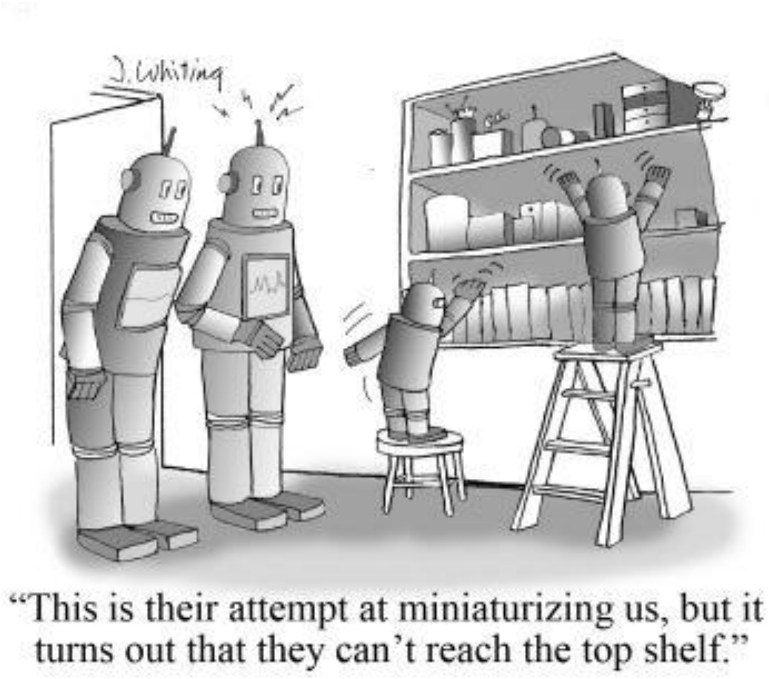
Google Fiber, Google Loon, Super Glass and More!

"Rare Earth Mineral Boon, Bookless Libraries, Google's Balloon Loon, Toddler Tech Tantrums**"** by Marilyn K. Martin

Rare Earth Minerals; Consumers Driving Development of Healthier Products; Rivalries among Tech Giants as They Expand into New Realms; Could You Die for High Tech Secrets or "Means-well" Actions?; Google Fiber and Google Loon; E-Book News; Law Enforcement Tech; Other Programs for Wider and Cheaper Internet Access; Family Tech; Wireless Broadband Innovation; Super Glass.

Rare Earth Minerals: From Mining to Developing Substitutes

Rare earth minerals are extremely important in high tech. They are comprised of 17 rare elements which are vital for everything from computers to hybrid cars to smartphone batteries. Rare earth minerals became a political flashpoint in 2010 when the globe's biggest producer, China, limited domestic output and slashed export quotas by 40%. Our Moon and asteroids may have an abundance of rare earth minerals, but alternate sources on Earth need to be found in the interim.



"This is their attempt at miniaturizing us, but it turns out that they can't reach the top shelf."

In March 2013, Bloomberg announced that Lockheed Martin was preparing to search the bottom of the Pacific Ocean (*www.bloomberg.com/news/2013-03-14/lockheed-to-use-soviet-submarine-hunt-data-in-seabed-mining-plan.html?cmpid=yhoo*) for rare earth minerals. Lockheed set up a new company, U.K. Seabed Resources, which has been granted first commercial exploration rights for a 22,000 square mile area of the Pacific. Exploration will start late this summer, using Lockheed Martin's bottom-of-ocean data from the 1970s and 1980s, when they were subcontracted by the late billionaire Howard Hughes to search for a lost Soviet submarine.

Meanwhile, in Nova Scotia (Canada), prospecting for rare earth elements has become the new gold rush. According to Canada's *Herald News* in January 2012, the biggest money for Canadian prospectors right now is made by finding the rare element graphite—not gold. And Molycorp Inc., rare earth mining company, reported in May 2013 that their first quarter results were up 9% (*www.molycorp.com/molycorp-reports-first-quarter-2013-results*) over their fourth quarter 2012 results.

Reuters reported in June 2012 that the hunt for substitutes (*www.reuters.com/article/2012/06/22/us-rareearths-alternatives-idUSBRE85L0YB20120622*) for rare earth minerals was also heating up. Car makers, from Toyota to Renault, have started producing car motors without rare earth minerals. While companies that produce rare earth substitutes for backlighting technology, like Nanosys Inc. (*www.nanosysinc.com/*) and Philips (*www.usa.philips.com/*), are also raking in profits from the yoyo-availability and costs of rare earth minerals.

Consumers Driving Development of Healthier Products

With the arrival of consumer-technology, trying to sort out what shoppers want most is an on-going challenge. In December 2012, FoodProductionDaily.com ran an article about how regulation and consumer demand is driving the switch to "greener" chemicals (*www.foodproductiondaily.com/Quality-Safety/Regulation-and-consumer-demand-driving-switch-to-greener-chemicals*). The uncertainty about the safety of certain food chemicals is eroding consumer confidence, and driving companies like Campbell Soup to remove BPA from their products.

An April 2013 report in *BusinessWire* discussed the results of their new report on consumer health (*www.businesswire.com/news/home/20130425006149/en/Research-Markets-Product-Development-Trends-Consumer-Health*). Busy lifestyles are driving the popularity of energy and calming products, on-the-go delivery mechanisms, preventive treatments and cheaper options.

According to the IFT Annual Meeting and Food Expo in late-June 2013, consumer trends (*live.ift.org/tag/consumer-trends/*) reveal that people are more interested in wellness. More than just healthy food products, consumers are also now driving demand for more recyclable packaging, as well as interest in a company's environmental responsibility. Consumers are also becoming more interested in where a food product comes from, highlighting the product's safety and sustainability.

Rivalries among Tech Giants as They Expand into New Realms

In April 2013, *Wired* ran an article on how Amazon's seminal EC2 cloud computing service now has a competitor with Google's Compute Engine (*www.wired.com/wiredenterprise/2013/04/google-compute-open/*). Google announced that their new "Gold Support" program now lets anyone have access to their 24/7 support engineers—beginning at $400 a month. Recent tests by Scalr (*www.scalr.com/*) found that virtual servers boot 4 to 10 times faster on Google's Compute Engine than on Amazon's EC2, and it's possible to move data onto Google as much as 20 times faster than onto EC2.

With dour reviews of Apple under new leadership, and major shakeups at Microsoft, *Forbes* ran an article in May 2013 about how both companies are going to have to step into or speed up (*www.forbes.com/sites/haydnshaughnessy/2013/05/13/microsoft-and-apple-will-have-to-make-stuff-to-be-real-innovators/*) their device manufacturing to stay competitive. Software giant Microsoft is already calling themselves a "device and service company," and Apple may or may not have company-saving devices in the pipeline. But despite America's increasingly device-centric society, the device/hardware innovation leaders are currently Asian high tech companies.

To survive in high tech today, according to this article, companies need to innovate regularly and aim for ever narrowing market segments. Samsung alone will launch at least 8 new products in this year's second quarter. While Apple's upcoming products are a mystery. And Microsoft is retooling Windows 8, the Xbox and their entire company—after a roar of customer complaints.

Could You Die for High Tech Secrets or "Means-well" Actions?

As I write this in late June 2013, NSA leaker Edward Snowden is still hidden somewhere in the Moscow airport, searching for a safe country to accept him as an exile. The danger-quotient is obvious, but I

wondered if other young tech geniuses have gotten tangled up in international intrigue or flaunted the law in naive activism—that perhaps ended in deadlier fashion.

The CSMonitor in April 2013 ran a story on Shane Todd (*www.csmonitor.com/USA/2013/0430/Was-Shane-Todd-murdered-over-high-tech-secrets?nav=93-csm_category-storyList*). As a US citizen working in Singapore, he thought he had access to "restricted (U.S. military) technology." A week before he was to return home, in June 2012, he suddenly committed suicide according to Singapore authorities. His mother doesn't believe he committed suicide, and Shane's death has become an international incident, with even Secretary of State John Kerry taking up the issue in private meetings with Singapore officials.

According to *DailyTech* in June 2013, a new Congressional bill (*www.dailytech.com/Bill+to+Reform+Computer+Fraud+and+Abuse+Act+Proposed+in+Aaron+Swartzs+Name/article31812.htm*) dubbed "Aaron's Law" has recently been introduced, to reform the badly outdated and ambiguous Computer Fraud and Abuse Act of 1986. The bill is named after Aaron Swartz, a Reddit co-founder and co-developer of the RSS standard. After selling Reddit to Conde Nast, the wealthy Swartz became a passionate activist for open-source material. After he illegally downloaded 4.8 Million scholarly journal articles from subscription-only JSTOR (*www.jstor.org/*) into MIT's computers, he was hit with ever-multiplying charges from both the feds and MIT administrators. Growing despondent, he hanged himself earlier this year.

Google Fiber and Google Loon

Google, meanwhile, continues to explore innovative high tech along the lines of providing faster/better access to the Internet. According to a June 2013 article in *Forbes*, Google Fiber is projected to reach 8 million homes (*www.forbes.com/sites/eliseackerman/2013/06/14/google-fiber-could-reach-8-million-homes-by-2022/?partner=yahootix*) by 2022. Currently, Google is ready to expand its superfast 1-gigabit-per-second Internet service to Austin, Texas and Provo, Utah. Analysts have calculated that Google could be in the top ten of broadband providers in under a decade. The strategy is widely applauded, since "Faster speed enables Google to innovate faster, and make new and better products that can leverage faster broadband speed."

Also in June 2013, the *CSMonitor* ran a story on Google's Loon project (*www.csmonitor.com/Innovation/Pioneers/2013/0615/How-loony-is-the-Google-Loon-project?nav=93-csm_category-storyList*), to bring Internet access to Third World countries with stratospheric balloons. Google estimates that almost 5 billion people in the world today can't access the Internet, since they reside mainly in rural areas where installing fiber-optic cables or using satellites is prohibitively expensive. So Google is testing large weather-type balloons, floating 12 miles above Earth, along with a series of ground stations about 60 miles apart. These ground stations bounce signals off these balloons carrying solar-powered radio transmitters, which in turn beam the Internet back to the remote areas on Earth.

Meanwhile, critics say that cell phone towers and smartphones are already bringing the Internet to remote areas of Earth, although the balloon technology might be a boon in a major disaster. *NextBigFuture* ran a story at the end of June 2013 that technologists in Africa say that Google Loon won't be a competitive networking solution (*nextbigfuture.com/2013/06/how-many-african-countries-want-google.html*) for their continent. Google Loon only provides 3G connectivity, which is what cellular networks are already providing in Africa. Another criticism is that "The barrier to Internet adoption is not so much the lack of connectivity. It's the high cost of equipment." And poor people can't afford laptops and smartphones. (Google's Chinese partners are already working on affordable laptops and smartphones using Google Android.)

E-Book News: Bibliotech to Digital Public Library of America

In January 2013, *MySanAntonio* ran a story about how Bexar County in Texas is embarking on a new library system (*www.mysanantonio.com/news/local_news/article/Bexar-set-to-turn-the-page-on-idea-of-*

books-in-4184940.php#photo-4012897) that will be all e-books (no print books) called BiblioTech. The University of Texas at San Antonio was a pioneer among universities with bookless collections and technical libraries, and even the city of San Antonio offers downloadable books and other digitized information along with their paper volumes.

ArsTechnica announced in April 2013 that the Digital Public Library of America (DPLA) (*arstechnica.com/business/2013/04/the-digital-public-library-of-america-adding-gravitas-to-your-internet-search/*) has officially launched. Their Web site (*dp.la/*) lets users browse more than two million archived books, images, records and sounds. The content comes from libraries as diverse as Harvard University to Chicago and Boston Public Libraries.

Law Enforcement Tech: Murder Stats down, Chinese Extortion up

According to the *New York Times* in June 2013, Chicago, with their horrendous gun-violence stats in a gun-ban mega-city, has made tremendous strides this year in bringing down their shooting stats (*www.nytimes.com/2013/06/11/us/chicago-homicides-fall-by-34-percent-so-far-this-year.html?l=todaysheadlines&emc=edit_th_20130611&_r=0*). Hundreds of overtime police officers are being dispatched to 20 small danger-zones around the city, and are preventing gang retaliatory shootings by using a comprehensive analysis of the city's tens of thousands of gang members and their "turf." The police are also focusing on 400 gang members deemed "most likely" to be involved in a murder (as either victim or offender).

Crime-mapping is becoming more popular too, especially with big city Police Departments, and I've written about this in the past. What used to be a lengthy process of hiring a techie to crunch years of local crime data, can now be achieved through desktop computing and Geographic Information Systems (GIS) software, such as the free ArcGIS Explorer (*www.esri.com/software/arcgis/explorer*), or Maptitude (*www.caliper.com/Maptitude/Crime/default.htm*).

Most appealing for police departments is the aspect of "preventive policing," as discussed in several GIS articles at PoliceOne (*www.policeone.com/police-technology/software/GIS/mapping/*). There is even a way now to track fleeing suspects through a national online license plate monitoring site called PlateNet (*www.platenet.net/praweb/index.jsf*).

Also in June 2013, the *New York Times* (through the *Hawaiian StarAdvertiser*) ran a story about booming extortion (*www.staradvertiser.com/news/nyt/20130618_Photoshop_helps_fuel_extortion_boom_against_Chinese_officials.html?id=211921341*) in China—aided and abetted by Photoshop. Unpopular Chinese officials have to be constantly on the look-out for everything from anti-graft inspectors, to blackmailers with sexual traps and video cameras. Even worse, the "forged photography" industry is booming, with everyone from crime syndicates to power-hungry officials extorting other officials for political gain. Although the outrage over faked "obscene photos" finally got Chinese officials, at least on the local level, to crack down on the blackmailers.

Other Programs for Wider and Cheaper Internet Access

In March 2013, *ArsTechnica* ran a story about how solar power and white space networks are bringing 16Mbps broadband to towns in Kenya (*arstechnica.com/information-technology/2013/03/solar-power-and-white-spaces-bring-internet-to-towns-without-electricity/*)—that don't even have electricity yet. Microsoft deployed the network in February 2013 in conjunction with Kenyan government officials. It was initially set up in health clinics, schools, and one library. More sites are being added all the time. A Microsoft spokesman said that although some of the areas have mobile Internet access, "It's so expensive that nobody ever uses it."

ArsTechnica announced in April 2013 that California Internet Service Provider (ISP) Cal.net (*cal.net/*) is deploying TV White-Space broadband (*arstechnica.com/information-technology/2013/04/rural-california-*

isp-launches-white-spaces-broadband-for-remote-customers/) to reach rural residents without or only poor quality Internet access. Using RuralConnect (*whitespaceradios.net/*), a set of base station antennas and white space broadband radios were set up, with speeds up to 16Mbps, although Cal.net only promises wireless service up to just 6Mbps. It is available to businesses and residents in the Gold Country region of central and northeastern California.

Also in April 2013, the *Chicago Tribune* announced that Chicago was going to be a test city (*www.chicagotribune.com/business/breaking/chi-chicago-to-be-test-city-in-push-for-wider-and-cheaper-internet-20130416,0,5090651.story*) for wider, cheaper Internet. In a partnership with Connect2Compete (*www.connect2compete.org/*), Comcast's Internet Essentials (*www.internetessentials.com/*) will offer high-speed Internet service for $10/month to residents in certain zip codes. There is also an option for these low-income families to purchase a $150 computer, if their children already qualify for free or reduced school lunches.

Family Tech!

According to *SiliconValley* in June 2013, SV companies are now busy creating online and mobile apps and services for Seniors (*www.siliconvalley.com/ci_23514687/silicon-valley-poised-take-lead-technology-seniors*). They range from in-home sensors to monitor Seniors' movements and remind them to take medications, to wireless technology to let elderly patients get medical treatment without leaving home. This technology isn't new, but SV's focus on it is, like the site Lively Seniors (*livelyseniors.com/*), designed to help families and caregivers. "By 2030, 20% of the US will be aged 65 and older, and more of them will live longer and more independently in their older years than any time in history."

At the other end of the age scale, *LiveScience* (through YahooNews) in June 2013 offered some tips for Defusing Toddler Tech Tantrums (*news.yahoo.com/6-tips-defusing-tech-tantrums-133246601.html*). Toddlers not yet into their "terrible 2s" are already absorbed by the magic of smartphones and tablets, and are prone to shrieking meltdowns if the gadget is taken away. Experts weigh in with the usual: restrict their screen-time, and stay beside them when they do go online. New and helpful apps, like Kid'Z Play Mode (*play.google.com/store/apps/details?id=com.kidoz&hl=en*) filters for age-appropriate apps, and Kid Time (*itunes.apple.com/us/app/kid-time/id444678137?mt=8*) shuts down a device after a set period of time. Screen Time (*itunes.apple.com/us/app/screen-time-media-time-manager/id412387263?mt=8*) helps reward kids with screen-time in exchange for completing chores.

Wireless Broadband Innovation—and Foot-dragging

NextBigFuture ran an article in May 2013 that wireless transmission of 40 Gbit/s at 240 GHz over a distance of one kilometer has been achieved—and set a world record (*nextbigfuture.com/2013/05/40-gigabit-per-second-wireless-link-and.html*) for optical fiber transmission. The demonstration was achieved by the Fraunhofer Institute for Applied Solid State Physics (*www.iaf.fraunhofer.de/en.html*) and the Karlsruhe Institute for Technology (*www.kit.edu/english/*).

NextBigFuture ran a couple articles in June 2013 about the latest in wireless broadband. In the first article, Samsung's millimeter-wave transceiver technology could enable ultrafast mobile broadband (*nextbigfuture.com/2013/06/multigigabit-per-second-wireless.html*) by 2020, if government regulators could free up 100GHz of millimeter-wave spectrum, which is 200 times what mobile networks use today. The other article was about how US cable companies have multigigabit internet capability, but are waiting for competition or regulation (*nextbigfuture.com/2013/06/cable-companies-have-multigigabit.html*) to force them to offer higher speeds and lower prices.

Super Glass: From Flexible to Super-Strong

In April 2012, *Gizmodo* ran a story about a new type of glass (*gizmodo.com/5905392/this-new-super-glass-*

is-the-fogless-glare+free-future?tag=materials) being developed by MIT that is self-cleaning as well as resistant to glare and fog. Water bounces off without leaving a trace, which could be the future of everything from eyeglasses to camera lenses. And even give a tremendous boost to solar panels, since photovoltaic panels "can lose as much as 40% of their efficiency within 6 months as dust and dirt accumulate on their surfaces."

Engadget reported in June 2012 that Corning (*www.corning.com/index.aspx*) has unveiled a slim and flexible Willow Glass (*www.engadget.com/2012/06/04/corning-unveils-slim-flexible-willow-glass-video/*). Although it bends like plastic, it is real glass that is "ultra-thin and flexible for LCDs and OLEDs." This could mean lighter and curvier devices, since glass-shape is no long a barrier for design.

Gizmodo announced the release of Corning's Gorilla Glass 3 (*gizmodo.com/5972951/new-tougher-gorilla-glass-3-is-coming-next-week?tag=materials*) in January 2013. Corning has perfected the latest in their series of ultra-tough gadget glass, and introduced it at the 2013 Consumer Electronics Show. According to *InsideScience* in May 2013, this latest version of Gorilla Glass incorporates "an equilibrium of stress and tension" into the manufacturing process, to give normally fragile glass a super-strength (*www.insidescience.org/content/what-stresses-gorilla-glass-makes-it-stronger/1009*).

Marilyn is a freelance writer and humorist, with a special interest (besides computers and technology) in Science Fiction. Besides short stories published in various magazines, she also has some new e-books available on Amazon Kindle: *Hunting Monster Aliens (*www.amazon.com/s/?_encoding=UTF8&camp=1789&creative=390957&field-keywords=Hunting%20Monster%20Aliens%20martin&linkCode=ur2&rh=n%3A133140011%2Ck%3AHunting%20Monster%20Aliens%20martin&tag=comput0b9-20&url=search-alias%3Ddigital-text*)* is an on-going series of novellas, about a wise-cracking team of ghost investigators who occasionally turn into alien-monster hunters. *Culture Crash! A California Yankee Transplanted to Texas (*www.amazon.com/gp/product/B00CKXF8GQ/ref=as_li_ss_tl?ie=UTF8&camp=1789&creative=390957&creativeASIN=B00CKXF8GQ&linkCode=as2&tag=comput0b9-20*)* is a collection of humor essays chronicling her adventures in her new home-state.

ComputorEdge E-Books has converted many of Marilyn's computer humor columns into four e-books.

Now available in a four-book Kindle bundle from Amazon.com *The Best Computer and Internet Humor, Anecdotes, and Jokes Found on the Web (*www.amazon.com/gp/product/B00ACVX2PC/ref=as_li_ss_tl?ie=UTF8&camp=1789&creative=390957&creativeASIN=B00ACVX2PC&linkCode=as2&tag=comput0b9-20*).* Marilyn's collection of the funniest stories about our computing machines and how we use them at home, the office, and in cyber space. Save 25% off the individual book price!

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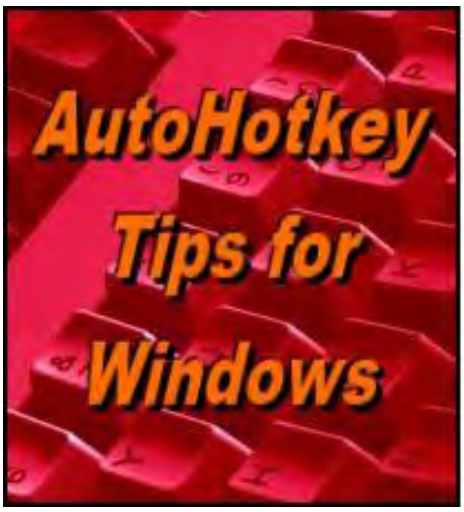


Combining AutoHotkey Apps

“Too Many AutoHotkey Apps Running? How to Combine Them into One!**”** by Jack Dunning

This may be Jack's most important AutoHotkey column yet for understanding how to write and debug scripts.

*This column gets into the nitty gritty of how to think about AutoHotkey scripts. It includes basic concepts that, once understood, make writing and debugging scripts much easier. It you've never heard of the free AutoHotkey software and want a brief introduction see this short "Introduction to AutoHotkey (*www.computoredge.com/AutoHotkey/Introduction_AutoHotkey_Review_and_Guide_for_Beginners.html*)" for newcomers.*

There are a ton of little AutoHotkey apps which you may find useful every day. It's easy enough to start accumulating these scripts and add them to the Startup folder for automatic loading. However, if you don't combine them into larger scripts, you will soon find an excess of little green AutoHotkey icons in your System tray. This becomes too much and too confusing. It's time to start combining many of these cool apps into one AutoHotkey program. However, there are often problems inherent in combining independent AutoHotkey scripts.

Conflicting AutoHotkey GUI Windows

For example, if I take two simple apps previously demonstrated in this column, *AddDate.ahk* and *LaunchWindow.ahk*, there is a built-in conflict. (Information and links for both of these scripts can be found in "AutoHotkey Script Roundup (*webserver.computoredge.com/online.mvc?issue=3127&article=ahk*).") Each Graphic User Interface (GUI) window has been defined independently in separate scripts. However, if I try to combine them into one with the #*INCLUDE* command:

```
#Include AddDate.ahk
#Include LaunchWindow.ahk
```

only one of the windows will pop-up with its hotkey combination (see Figure 1). This is caused by the ambiguity between the two independent windows when combined into one script. They are both using the same GUI commands without distinguishing that they are for separate windows. This causes the GUI from the first hotkey combination used (whichever it is) to become the main window.

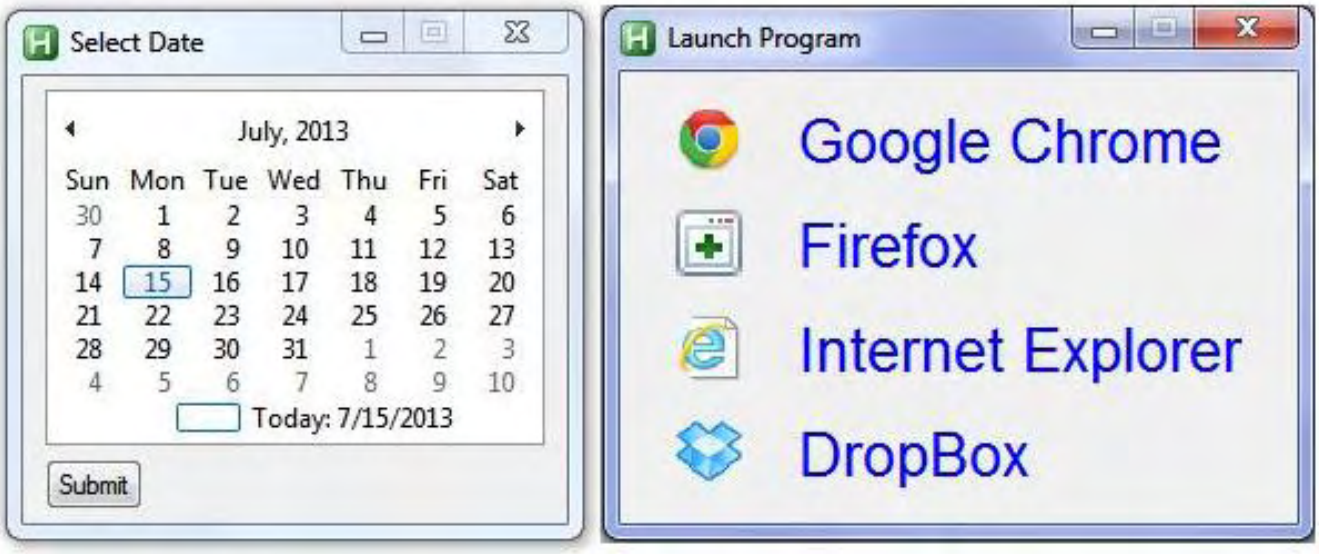


Figure 1. When combined into one AutoHotkey file with the INCLUDE statement, only one of these GUI windows—AddDate (left) or LaunchWindow (right)—will display depending upon which hotkey combination is used first.

For example, *AddDate.ahk* is using the commands:

```
Gui, Add, MonthCal, vDayPick
Gui, Add, Button, Default, Submit
Gui, Show,, Select Date
```

while *LaunchWindow.ahk* uses the same *Gui, Add* and *Gui, Show* commands:

```
Gui, Add, Picture, w30 h-1 section xs gLaunchDropBox Icon6
      , C:/Users/%A_UserName%/AppData/Roaming/Dropbox/bin/Dropbox.exe
Gui, Add, Text, ys gLaunchDropBox, DropBox
Gui, Show, , Launch Program
```

with no way to distinguish which command applies to which GUI.

This confusion between the two GUI windows is not a problem as long as they are in different scripts running separate threads. However, once combined into the same AHK script, they must be identified separately or a conflict will occur. Fortunately, there is a GUI naming system in AutoHotkey_L (AutoHotkey_L is the current version of AutoHotkey and the download at the main AutoHotkey Web site) which makes GUI window identification easy.

Rather than using the following:

```
Gui, Add, MonthCal, vDayPick
Gui, Add, Button, Default, Submit
Gui, Show,, Select Date
```

to create and show the window, the script is updated to:

```
Gui AddDate:Add, MonthCal, vDayPick
Gui AddDate:Add, Button, Default, Submit
Gui AddDate:Show,, Select Date
```

which adds the name *AddDate* followed by a colon (:) in place of the comma between the GUI command (*l. autohotkey.net/docs/commands/Gui.htm*) and subcommand (*Add*, *Show*, etc). By using this naming method when there are separate GUI windows in the same script, the conflicts are eliminated.

When first learning AutoHotkey and looking through the online AutoHotkey documentation, this GUI naming option is not readily apparent. I have not discuss it in any of my previous columns nor the beginner's books mostly because the scripts I was demonstrating only had one GUI window (if any) and did not produce the conflicts caused by running multiple GUI windows. For most basic AutoHotkey apps, you may never see this type of problem. It does not affect the basic AutoHotkey operation of hotkeys and instant replacements as long as multiple GUI windows are not used or if the GUI windows are removed (*Gui, Destroy*) after use. Yet, since the longer you use AutoHotkey, the greater the likelihood that you will want to combine multiple GUI windows, I recommend that names be used as both identifiers and descriptions in all future GUI definitions. I will be using this technique in future scripts because, quite frankly, there is no reason not to do it and it may save future headaches. For example the *LaunchWindow. ahk* script is now changed by adding LaunchBox: to all of the GUI commands:

```
^#L::
Gui LaunchBox:Font, s20 cBlue, Arial
Gui LaunchBox:Add, Picture, w30 h-1 section gLaunchGoogle Icon1
     , C:/Users/%A_UserName%/AppData/Local/Google/Chrome/Application/chrome.exe
Gui LaunchBox:Add, Text, ys gLaunchGoogle, Google Chrome
Gui LaunchBox:Add, Picture, w30 h-1 section xs gLaunchFirefox Icon3
     , %ProgramFiles%/Mozilla Firefox/firefox.exe
Gui LaunchBox:Add, Text, ys gLaunchFirefox, Firefox
Gui LaunchBox:Add, Picture, w30 h-1 section xs gLaunchExplorer Icon3
     , C:/Program Files/Internet Explorer/iexplore.exe
Gui LaunchBox:Add, Text, ys gLaunchExplorer, Internet Explorer
Gui LaunchBox:Add, Picture, w30 h-1 section xs gLaunchDropBox Icon6
      , C:/Users/%A_UserName%/AppData/Roaming/Dropbox/bin/Dropbox.exe
Gui LaunchBox:Add, Text, ys gLaunchDropBox, DropBox
Gui LaunchBox:Show, , Launch Program
Return
LaunchGoogle:
Run C:/Users/%A_UserName%/AppData/Local/Google/Chrome/Application/chrome.exe
WinClose
return
LaunchFirefox:
Run "C:/Program Files/Mozilla Firefox/firefox.exe" www.facebook.com
WinClose
return
LaunchExplorer:
Run "C:/Program Files/Internet Explorer/iexplore.exe"
WinClose
return
LaunchDropBox:
Run C:/Users/%A_UserName%/Dropbox
WinClose
return
```

The GUI name *LaunchBox*, while distinguishing the GUI window from other GUIs, is also descriptive of the function of the window. This has no practical effect on how the single GUI script runs, but helps prepare it for future script integration with other GUIs.

It's important to note that all the default labels associated with the GUI window (GuiClose, GuiEscape, GuiSize, etc.) also use the GUI name. In the following *AddDate.ahk* script:

```
^#d::
  Gui AddDate:Add, MonthCal, vDayPick
  Gui AddDate:Add, Button, Default, Submit
  Gui AddDate:Show,, Select Date
Return
AddDateButtonSubmit:
  Gui AddDate:Submit
  FormatTime, DayPick, %DayPick%, MMMM d, yyyy
  Send, %DayPick%
  Gui AddDate:Destroy
Return
AddDateGuiClose:
   Gui AddDate:Destroy
Return
```

ButtonSubmit becomes *AddDateButtonSubmit* and *GuiClose* becomes *AddDateGuiClose*.

While conflicting AutoHotkey GUI windows is an obvious problem when combining two (or more) AutoHotkey scripts into one, there are a number of other issues that need to be addressed. But first how AutoHotkey processes a script when it is loaded must be understood. The better how AutoHotkey reads and runs the script files (AHK), the easier it is to write and debug those scripts. There are times when certain commands need to appear in the beginning of a script and other times when they work just as well at the end.

How AutoHotkey Reads a Script

Full disclosure: I looked for a description online of how the AHK files are processed, but only found bits and pieces in the documentation. The process I describe here is based partially upon what I uncovered, but even more so on what I've experienced when running files. Whereas I may make errors in some of the technical details, conceptually this is what happens when an AutoHotkey script is loaded.

Understanding how AutoHotkey processes a script is key to debugging program problems whether working an individual script or combining multiple scripts. In some ways, the concepts presented here may be the most important for writing successful AutoHotkey scripts. If you don't understand how AutoHotkey handles your code, then you won't know why seemingly logical code just doesn't work. AutoHotkey works in some ways that I've not experienced with other programming languages.

In many programming languages (especially the early languages such as BASIC), the code is read starting at line one executing the code and continuing line by line through to the end. While there may be some sort of preprocessing (usually when compiling code) looking for syntax errors, the appropriate matching sets of parentheses, or invalid commands, the program generally just works through the logic throwing errors when they are encountered. This is not the case with AutoHotkey. Before starting the logical execution of any code, the AutoHotkey script is processed for hotkey combinations, hotstring replacements and conditions (or actions) which involve # statements.

I've seen AutoHotkey described as event driven. When AutoHotkey makes its initial pass through a script, it's looking for contained modules which respond to an event—usually a hotkey combination or instant text replacement. Normally bound by the hotkeys (e.g. ^#!E:: in code or CTRL+ +ALT+E on the keyboard) at the beginning and the *Return* command marking the end of the routine, these modules are placed into

memory ready to respond when the hotkey combination is activated. No code is executed until after this first pass—and then it is only the code located at the beginning of the script.

This why a simple AutoHotkey IF command statement (*l.autohotkey.net/docs/commands/IfExpression.htm*) cannot be used to create a conditional hotkey combination. For example:

```
IfWinActive, Untitled - Notepad
{
    #!::MsgBox This is Notepad
}
```

When AutoHotkey sees this code on the initial pass, it sets up #! (+ALT) as a hotkey combination (event) which pops up the message "This is Notepad", but it completely ignores the logic of IfWinActive (*l.autohotkey.net/docs/commands/IfWinActive.htm*). After loading, the hotkey combination will always display the message, regardless of whether *Untitled - Notepad* is the active window. That's why to create a conditional hotkey combination a # command must be use, such as #IfWinActive (*l.autohotkey.net/docs/commands/_IfWinActive.htm*):

```
#IfWinActive  Untitled - Notepad
    #!::MsgBox This is Notepad
#IfWinActive
```

This form of this command (preceded by #) is executed on the same pass as the setup of the hotkey events. The second #IfWinActive limits the first # conditional to only the code between the two. Now the hotkey combination #! (+ALT) will only operate when *Untitled - Notepad* is the active window.

As described, when the AHK script is first loaded by AutoHotkey, the program sweeps through the entire file picking up the hotkey combinations, text replacements and # commands (e.g. #Include, #IfWinActive) while matching label calls to the following labels (subroutines). If errors are found at this point, the processing is stopped and the error is highlighted. For example, if a close parenthesis is missing or if a label (subroutine) is called, but the label subroutine with the same name isn't found somewhere after the call, an error results.

Note: I don't know whether there are different passes through the AutoHotkey script looking for syntax errors and/or logic errors, but for all practical purposes it doesn't matter. I would expect that these checks would be done before any events are set up. In any case, the execution will stop when one of these errors is encountered and none of the events will be set up until the errors are corrected and the script is reloaded.

Since AutoHotkey searches the script for events first, a basic hotkey combination (e. g.^#D::) or word replacement (e. g. ::lol::laugh out loud) can appear almost anywhere in the script and it will be activated. All those types of events are immediately set up. That doesn't mean that their placement in the script can be arbitrary. While these basic commands will always be loaded when included in a script, if they appear in the wrong place (i.e. inside a loop or a regular conditional), they may interfere with the later running of that code (the loop), even though they are still active.

In this first pass, the #INCLUDE command (*l.autohotkey.net/docs/commands/_Include.htm*) loads the code from the designated script or file as if it existed at that spot in the new combined script. For that reason the location and order of the *#INCLUDEs* may be very important, since it could affect the next step, the auto-execute. which is the running of the AutoHotkey commands found at the beginning of the script through to the end or until a hotkey, hotstring, or Return command is encountered.

The Auto-execute Section of an AutoHotkey Script

Once AutoHotkey has completed its initial sweep of the script setting up hotkeys and hotstrings, processing # commands, checking syntax errors (spelling of commands) and logic errors (missing commands and parameters), the auto-execute (*l.autohotkey.net/docs/Scripts.htm#auto*) portion of the script starts at the first line of executable code and continues through until it reaches either the end of the script, the first hotkey or hotstring, or the *Return* command (see Figure 2). Any initial setup must be done in this first part of the script. That's why some commands such as FileInstall (*l.autohotkey.net/docs/commands/FileInstall.htm*) which is used to pack external files into a compiled AutoHotkey file need to appear at the beginning of a script. If there are commands that must execute when the script loads, they must appear in the auto-execute section (before the first *Return* or hotkey/hotstring).

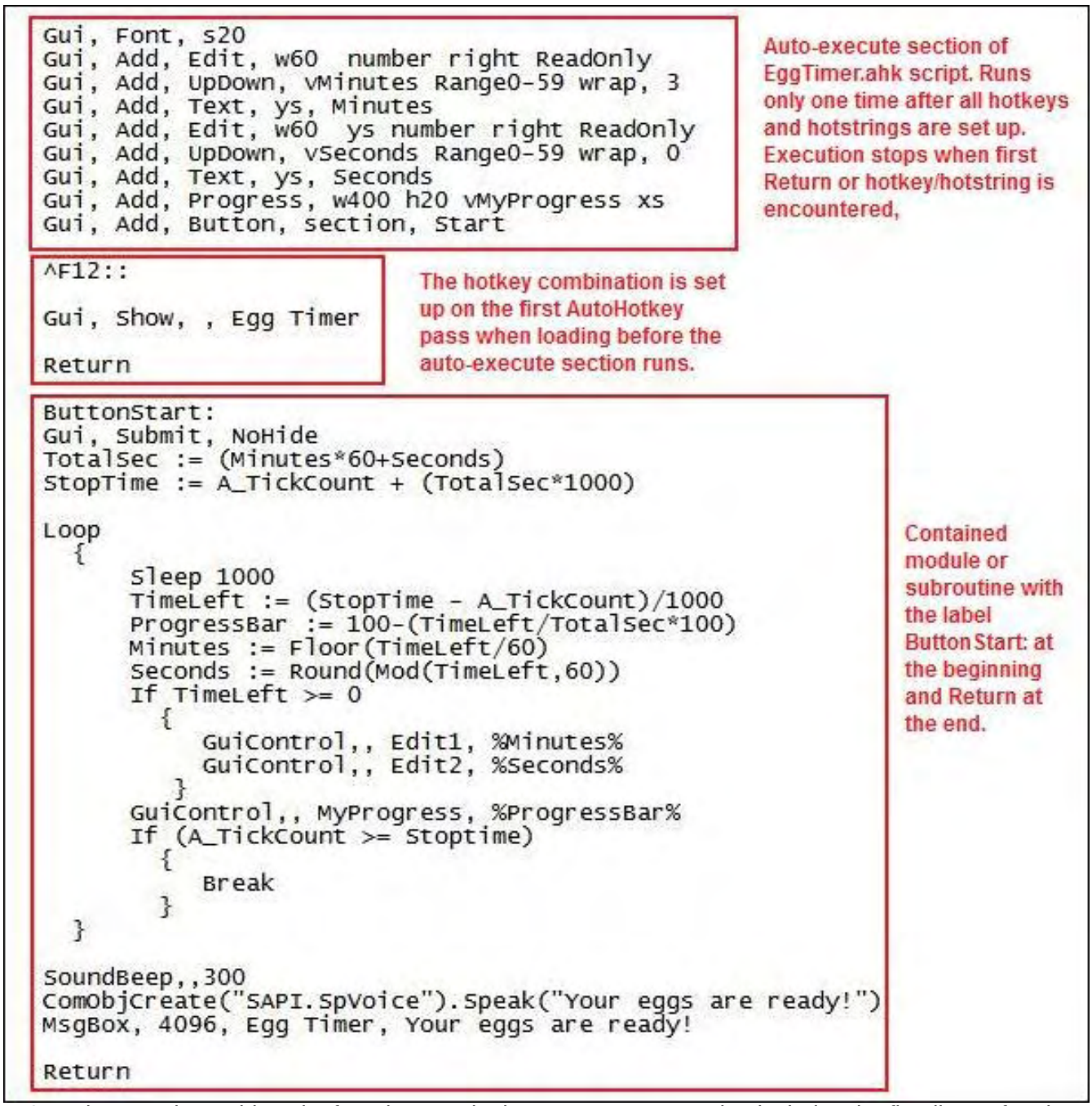


Figure 2. In the EggTimer.ahk script from last week, the auto-execute section includes the first lines of code until it hits the hotkey. Note that there is no Return after the auto-execute section. The space between the Return and the ButtonStart: label is no man's land. Any code placed there would be lost.

Note: I've seen people who are accustomed to traditional programming place commands after the first Return *then wonder why they won't run. If the commands are either not within the auto-execute section at the beginning of the script or within a module (label or subroutine bounded by a* Return *or between the curly brackets of a function), they will never be seen by AutoHotkey. They are lost in space. (A one-line hotkey or hotstring is also a separate event (module) even though there is no* Return *command.)*

This can be a source of problems when combining scripts because each file may have its own auto-execute section (lines of code at the beginning for a script). The only auto-execute section which will run when loading is the section in the first included file. If there is one hotkey, hotstring or Return command in the first included file, then that will prevent all other auto-execute sections from other included scripts from running.

This is a real problem if the scripts require initial action such as reading an INI file for setup information. However, there are a couple of ways around this.

Combining Auto-execute Sections of AutoHotkey Scripts

If you find that you are having conflicts between AutoHotkey scripts that you're combining with the *#INCLUDE* command, then you will most likely need to modify the scripts. The first method may be to combine the auto-execute sections from each script into the first script included. This may be a major rework of the scripts, but will aid in the resolution of problems. However, it is likely that the scripts will no longer run independently since the subject auto-execute code can only exist in one script.

An easier way to resolve this issue is to turn the entire script, including the auto-execute section into a hotkey routine. This may be as simple as adding the new hotkey combination to the beginning of the auto-execute section at the beginning of the script and enclosing with the *Return* command at the end of the auto-execute section. I used this technique to combine the *Reminder.ahk* script with other AutoHotkey apps:

```
^#R::
  Hotkey, ^#R, SetReminder, On
  Menu, Tray, Add, Set Reminder, SetReminder
  Menu, Tray, Tip, Editing Utilities
IfExist, %A_AppData%/Reminder/Reminder.ini
  {
    GoSub, ReadIni
    If(RemTime > A_Now)
      {
        MyTime := RemTime
        MyNote := RemMemo
       GoSub, ReminderButtonSubmit
      }
     Else
      {
        MyTime := A_Now
        MyNote := "Remind Me!"
      }
  }
Else
  {
    FileCreateDir, %A_AppData%/Reminder/
    MyNote := "Remind Me!"
  }
```

```
Return
```

The primary problem was that the auto-execute now became part of a hotkey event and would not run when loading. It waited until I activated the hotkeys. The solution was to add:

```
SendInput, ^#r
```

to the auto-execute (beginning) of the main script with the #*INCLUDE*s. The hotkey combination automatically activates as part of the auto-execute section after the multiple scripts have been added to the main script. This technique requires much less editing than combining auto-execute sections and can be use for any number of scripts.

Note: Be sure to use a lowercase letter (^#r) with the *SendInput* command (even if you used an uppercase letter when you set it up (^#R::). The *SendInput* command interprets ^#R as CTRL+ +SHIFT+r whereas ^#r is CTRL+ +r. Get this wrong and it will drive you crazy when it doesn't work. It did me.

A Common GUI Error

One of the most common errors encountered is when a scripts attempts to recreate a variable in a GUI by rerunning the *Gui, Add* command with the variable option (see Figure 3). If you have done any work with AutoHotkey GUIs, then you have probably seen this error—many times.

Figure 3. When a routine attempts to recreate the variable vDayPick which is already in use, AutoHotkey displays this error.

This error is usually caused by the second use of the hotkey combination while the GUI still exists. One way around this problem is to put the initial setup *Gui, Add* commands in the auto-execute section at the beginning of the script, outside of the hotkey routine. That way using the hotkeys will not attempt to recreate the variable. However, if you are combining scripts in one main script as shown above by including the auto-execute section within the hotkey routine this is problematic.

A better approach to resolving this issue may be to use Gui, Destroy (*l.autohotkey.net/docs/commands/Gui.htmDestroy*) to remove the GUI and the variable. That way the variable can be recreated without a problem on the next use of the hotkey combination. In the above example in Figure 2, the Gui, Destroy command was added at in two labels:

```
AddDateButtonSubmit:
  Gui AddDate:Submit
  FormatTime, DayPick, %DayPick%, MMMM d, yyyy
  Send, %DayPick%
  Gui AddDate:Destroy
Return
AddDateGuiClose:
   Gui AddDate:Destroy
Return
```

The first, *AddDateButtonSubmit:*, removes the GUI when a date is selected. The second, *AddDateGuiClose:*, removes the GUI if the little "x" in the upper right-hand corner is clicked to close the GUI.

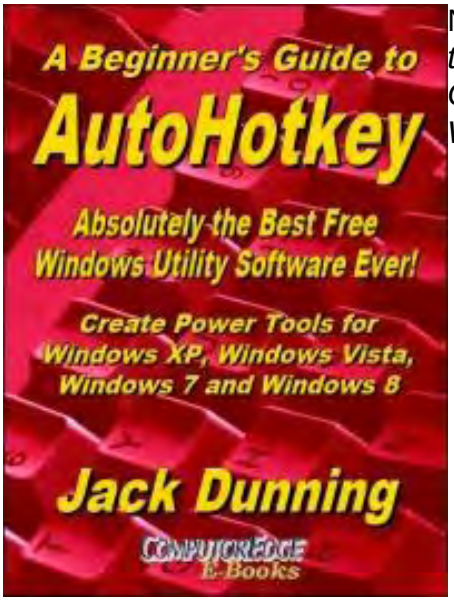
It is also possible that the set it up that the *Gui, Add* lines only run conditionally when the GUI window doesn't exist (IfWinNotExist (*l.autohotkey.net/docs/commands/IfWinExist.htm*)), but DetectHiddenWindows (*l.autohotkey.net/docs/commands/DetectHiddenWindows.htm*) should be set on since the GUI is likely to be hidden:

```
DetectHiddenWindows, On
^#D::
IfWinNotExist, Select Date
 {
  Gui AddDate:Add, MonthCal, vDayPick
  Gui AddDate:Add, Button, Default, Submit
 }
  Gui AddDate:Show,, Select Date
Return
```

This way it's not necessary to *Gui, Destroy* the window between uses which clears all saved data. This may be the preferred method if you don't want the GUI to return to the default each time it's used. When the AddDate GUI pops up again, it will show the last date used.

This column is a little more involved than many, but it may be the most important. If you understand what AutoHotkey is doing when it loads a script, it's much easier to see errors and debug the code. While I've attempted to explain this in easy terms, I don't always know when I've been successful. This information is likely to become the first chapter in my next AutoHotkey book. If this explanation is too sketchy to be useful to you, please e-mail me with the "•Submit AutoHotkey Questions, Tips, or Tricks!" link in the navigation bar on the left side under "Reader Submissions." I'll give it another shot.

* * *



Now available in e-book format from Amazon, Jack's *A Beginner's Guide to AutoHotkey, Absolutely the Best Free Windows Utility Software Ever!: Create Power Tools for Windows XP, Windows Vista, Windows 7 and Windows 8 (*www.amazon.com/gp/product/B009SI3F52/ref=as_li_ss_tl?ie=UTF8&camp=1789&creative=390957&creativeASIN=B009SI3F52&linkCode=as2&tag=comput0b9-20*).*

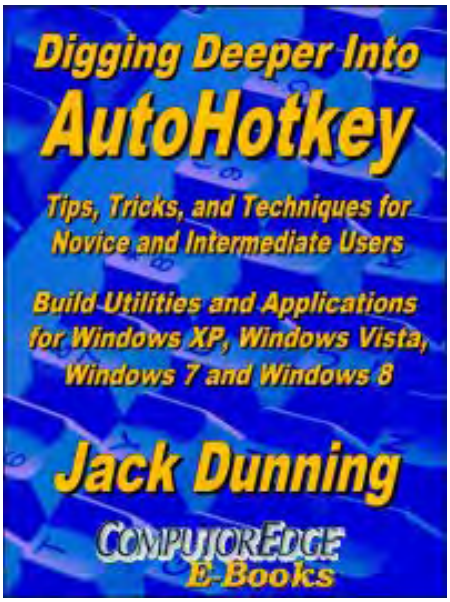
Building Power Tools for Windows XP, Windows Vista, Windows 7 and Windows 8, AutoHotkey is the most powerful, flexible, *free* Windows utility software available. Anyone can instantly add more of the functions that they want in all of their Windows programs, whether installed on their computer or while working on the Web. AutoHotkey has a universality not found in any other Windows utility—free or paid.

Based upon the series of articles in *ComputorEdge*, Jack takes you through his learning experience as he explores writing simple AutoHotkey scripts for adding repetitive text in any program or on the Web, running programs with special hotkeys or gadgets, manipulating the size and screen location of windows, making any window always-on-top, copying and moving files, and much more. Each chapter builds on the previous chapters.

For an EPUB (iPad, NOOK, etc.) version of A Beginner's Guide to AutoHotkey click here! (*computoredgebooks.com/A-Beginners-Guide-to-AutoHotkey-EPUB-format-iPad-Nook-etc-AUTOHOTKEY-1.htm*)

* * *

Jack's latest AutoHotkey book which is comprised of updated, reorganized and indexed columns from the last six months is now available at Amazon for Kindle hardware (*www.amazon.com/gp/product/B00CTACUMK/ref=as_li_ss_tl?*



ie=UTF8&camp=1789&creative=390957&creativeASIN=B00CTACUMK&linkCode=as2&tag=comput0b9-20) (or free software) users. Since the columns were not all written in a linear fashion, the book has been reorganized and broken up into parts by topic. The book is not for the complete beginner since it builds on the information in *A Beginner's Guide to AutoHotkey (*www.amazon.com/gp/product/B009SI3F52/ref=as_li_ss_tl?ie=UTF8&camp=1789&creative=390957&creativeASIN=B009SI3F52&linkCode=as2&tag=comput0b9-20*).* However, if a person is reasonably computer literate, they could go directly to this book for ideas and techniques without the first book.

If you've been following along with my AutoHotkey columns, then there is little new information in the book (although I have added more clarification for techniques I felt were either confusing or wrong). The only reason I can see to buy it would be as a handy reference. The AutoHotkey commands used are included in a special index to the chapters in which they appear. Even I can't remember everything I wrote.

For an EPUB (iPad, NOOK, etc.) version of Digging Deeper into AutoHotkey click here! (*computoredgebooks.com/Digging-Deeper-into-AutoHotkey-EPUB-format-iPad-Nook-etc-AUTOHOTKEY-2.htm*)

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*. Jack is now in the process of updating and compiling his hundreds of articles and columns into e-books. Currently available:

Just Released! *Hidden Windows Tools for Protecting, Problem Solving and Troubleshooting Windows 8, Windows 7, Windows Vista, and Windows XP Computers (*www.amazon.com/gp/product/B00B8Z2ASG/ref=as_li_ss_tl?ie=UTF8&camp=1789&creative=390957&creativeASIN=B00B8Z2ASG&linkCode=as2&tag=comput0b9-20*).*

Jack's *A Beginner's Guide to AutoHotkey, Absolutely the Best Free Windows Utility Software Ever!: Create Power Tools for Windows XP, Windows Vista, Windows 7 and Windows 8 (*www.computoredge.com/AutoHotkey/AutoHotkey_Books_for_Beginners_and_Novices.html*)* and *Digging Deeper Into AutoHotkey (*www.computoredge.com/AutoHotkey/AutoHotkey_Books_for_Beginners_and_Novices.html*).*

Our second compilation of stupid *ComputorEdge* cartoons from 2011 and 2012 is now available at Amazon! *That Does Not Compute, Too! ComputorEdge Cartoons, Volume II: "Do You Like Windows 8 or Would You Prefer an Apple?" (*www.amazon.com/gp/product/B009JY65QQ/ref=as_li_ss_tl?ie=UTF8&camp=1789&creative=390957&creativeASIN=B009JY65QQ&linkCode=as2&tag=comput0b9-20*)*

Currently only at Amazon.com, *Jack's Favorite Free Windows Programs: What They Are, What They Do, and How to Get Started! (*www.amazon.com/gp/product/B008BLUZRS/ref=as_li_ss_tl?ie=UTF8&tag=comput0b9-20*).*

Available from Amazon, *Misunderstanding Windows 8: An Introduction, Orientation, and How-to for Windows 8 (*www.amazon.com/gp/product/B007RMCRH8/ref=as_li_ss_tl?ie=UTF8&tag=comput0b9-20*)!* Also available at Barnes and Noble (*www.barnesandnoble.com/w/misunderstanding-windows-8-jack-dunning/1109995715?ean=2940014229463*) and ComputorEdge E-Books (*www.computoredgebooks.com/Windows-Tips-and-Tricks_c4.htm?sourceCode=writer*).

Available exclusively from Amazon, *Windows 7 Secrets Four-in-One E-Book Bundle (*www.amazon.com/

gp/product/B00801M5GS/ref=as_li_ss_tl?ie=UTF8&tag=comput0b9-20*),*
*Getting Started with Windows 7: An Introduction, Orientation, and How-to for Using Windows 7 (*www.amazon.com/gp/product/B007AL672M/?&tag=comput0b9-20*),*
*Sticking with Windows XP—or Not? Why You Should or Why You Should Not Upgrade to Windows 7 (*www.amazon.com/gp/product/B00758J4L6/ref=as_li_ss_tl?ie=UTF8&tag=comput0b9-20*),*
and *That Does Not Compute! (*www.amazon.com/gp/product/B0052MMUX6/ref=as_li_ss_tl?ie=UTF8&tag=comput0b9-20*),* brilliantly drawn cartoons by Jim Whiting for really stupid gags by Jack about computers and the people who use them.

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Wally Wang's Apple Farm

“Microsoft Reorganizes” by Wally Wang

Microsoft Reorganizes; The Nook Goes Bust; Computer Education around the World; Classic Games; Cell Phone Coverage Map; 3D Printing on eBay; Hide Windows.

Microsoft recently reorganized (*ca.news.yahoo.com/microsoft-says-single-company-overhaul-134645284.html*) the entire company, which is one of the company's biggest reorganizations since the last time (*www.dmnews.com/microsoft-reorganizes-after-division-leader-steps-down/article/112918/#*) they did it in 2008. One of the main reasons Steve Ballmer, Microsoft's CEO, stated he wanted to reorganize the company was because "We are rallying behind a single strategy (*www.microsoft.com/en-us/news/Press/2013/Jul13/07-11OneMicrosoft.aspx*) as one company—not a collection of divisional strategies." That brings up the real question on why Microsoft divided the company into divisions that competed against themselves in the first place.

Every company should be organized behind a single strategy, not a collection of divisional strategies. Imagine a company like McDonald's pursuing different strategies. The marketing division might spend millions promoting the speed and efficiency of getting food to you quickly, but then the management division might focus on cutting costs by reducing workers, which would slow down their ability to get food to you quickly. The idea that a company should work towards one strategy only makes sense, yet it's one strategy that many companies often ignore. Instead of working together, people often work at odds with one another to the detriment of the entire corporation.

The main problem every company, and even individuals, face is defining who they want to be. By doing that, companies and individuals can also define who they aren't. By knowing who you aren't, you can avoid wasting time pursuing projects that won't help you reach your ultimate goal.

At one time, Microsoft's goal was simple: to put Microsoft software on every computer in every home and business. They had a clear goal and they did everything they could to achieve that goal when practically everyone used a Windows PC running Microsoft Office. Not only was Microsoft's goal clear, but it was also measurable. Walk into any business and chances were good you could see more than one Windows PC in the building.

Now look at Steve Ballmer's latest goal for Microsoft: "Going forward, our strategy will focus on creating a family of devices and services for individuals and businesses that empower people around the globe at home, at work and on the go, for the activities they value most."

Compare the two goals. First, there's the goal of putting Microsoft software on every computer in every home and business. Clear? Yes. Measurable? Yes. Now look at the new goal of "creating a family of devices and services for individuals and businesses that empower people around the globe at home, at

work and on the go, for the activities they value most." Vague? Yes, because what kinds of activities will Microsoft's family of devices and services help people achieve? Everyone has different activities that they value, so how can a family of devices and services meet those needs if those needs aren't clearly defined in the first place?

It's easy to see Microsoft software running on computers in almost every home and office. It's much harder to see "a family of devices and services for individuals and businesses that empower people...for the activities they value most." When your goal is buried in corporate double-speak, it's hard to know when your strategy is meeting your goal and when your strategy is straying from your goal.

Microsoft's original goal of having their software run on every computer in every home and office is still valid, but that would mean porting Microsoft Office for iOS and Android. Microsoft's current strategy is to use Microsoft Office as an enticement to use Windows, but their Microsoft Office 365 effectively undermines that strategy. Even Microsoft finally realized that they needed a cloud-based office suite and couldn't worry about losing Microsoft Office sales if people switched to Microsoft Office 365. What Microsoft needs to do is worry less about protecting their current products and worry about rivals killing their current products.

Companies not only need a clear strategy, but they also have to be unafraid of killing their own best products at the same time. Borders Books tried to protect their retail stores by redirecting their Web traffic to Amazon because Borders didn't want the hassle of selling books over the Internet. Microsoft is still trying to protect their Windows cash cow by morphing it into a tablet operating system while still retaining its desktop roots. That makes Windows 8 less than optimal for a tablet and a PC.

Microsoft actually had a good idea with their Courier tablet (*news.cnet.com/8301-10805_3-20128013-75/the-inside-story-of-how-microsoft-killed-its-courier-tablet/*), but they killed it when the Courier threatened Windows. So Microsoft's latest reorganization may look good on paper, but it needs to produce actual results and change the way the company pursues new products, even if they threaten to wipe out their existing ones. Otherwise, nothing may change at Microsoft. The only difference is that Steve Ballmer will have new people to blame and fire, and the reorganized company will stumble along, still clinging to their cash cows until rivals wipe them out for good. Just ask Borders Books how well their strategy worked to protect their retail stores from the threat of sales over the Internet.

The Nook Goes Bust

To the surprise of absolutely no one (except for the most delusional), Barnes & Noble has announced that they'll stop manufacturing (*www.marketwatch.com/story/if-nook-goes-bust-will-your-e-books-too-2013-07-11?dist=lcountdown*) their color Nook tablets. After trying to compete (and failing) against Amazon's Kindle Fire and Apple's iPad along with other tablets like the Google Nexus, Barnes & Noble wound up losing $177 million in the last quarter.

Physically, the Nook isn't a bad tablet, but there's nothing dramatically different about it either to separate it from its competitors. Given a choice between the Kindle Fire and the Nook, you can't go wrong with either tablet, but the Nook was late to the tablet market so most people just got an Amazon Fire or an iPad. Once someone buys a Kindle Fire or iPad, there's little reason for them to switch to a Nook.

With the Nook tablet disappearing, Nook owners can preserve their Nook library by downloading the free Nook app (*www.barnesandnoble.com/u/nook-mobile-apps/379003593/*) for iOS or Android. The big question is what will happen if Barnes & Noble stops developing their Nook app altogether? If that happens, you could lose access to all your Nook e-books.

Since Barnes & Noble is struggling in the e-reader tablet market (which represents the future) and struggling in the retail book business (which has been dying for years), what are the chances that Barnes & Noble will survive much longer? Even though Microsoft invested $300 million in Barnes & Noble, there's

little reason to expect Barnes & Noble to survive, let alone thrive, in the next few years.

Until the future brightens considerably for Barnes & Noble, investing any more money in Nook e-books could be risky, unless you don't mind losing access to your e-book library eventually. If you're the type to keep buying Nook e-books, perhaps you'd also like to keep buying Betamax video tape cassettes and cameras that need film.

Computer Education around the World

Knowing how to use a computer is essential in today's world, but too often, "computer literacy" curriculums focus on the trivial like teaching kids how to use Windows, Word, and PowerPoint. Instead of teaching kids specific programs, it's much smarter to teach kids basic principles for what they can do with a computer rather than the exact steps for how they can do it. Teaching someone how to use Word 2013 is far less useful than teaching someone how to write while using any word processor as a tool to organize their thoughts.

In the United Kingdom, the British education minister said, "Instead of children bored out of their minds being taught how to use Word and Excel by bored teachers, we could have 11-year-olds able to write simple 2D computer animations using an MIT tool called Scratch. By 16, they could have an understanding of formal logic (*www.infoworld.com/t/application-development/where-are-the-kid-coders-not-in-us-schools-222521*) previously covered only in university courses and be writing their own apps for smartphones."

Even tiny Estonia plans to start teaching kids how to program a computer (*www.geek.com/chips/estonia-to-teach-programming-in-schools-from-age-6-1513339/*) as early as age 6. Estonia's program, called "ProgeTiiger," will eventually become just another standard part of the curriculum like math and language studies.

While Estonia and the United Kingdom are teaching kids how to program, United States schools teach programming in only 10 percent of American high schools. The College Board reported that in 2010, only 14,517 American students took the AP computer science test, compared to 194,784 students who took the AP calculus test.

With fewer American students taking classes in math, science, and programming, Evans Data corporation estimates that by 2017, India will have more software developers (*www.infoworld.com/d/the-industry-standard/india-overtake-us-number-of-software-developers-2017-222378*) than the United States. Why don't more American students study math, science, and programming? In too many cases, students opt for easier subjects to study and then wind up graduating deeply in debt with poor chances of job opportunities for the rest of their lives.

Rather than focus on the short-term at the expense of a long-term strategy, people need to focus on the long-term and then see what they can do in the short-term to achieve their main goal. Just browse through something like *The Success Indicator (*www.amazon.com/gp/product/B00D2ZCL0M/ref=as_li_tf_tl?ie=UTF8&camp=1789&creative=9325&creativeASIN=B00D2ZCL0M&linkCode=as2&tag=the15minmovme-20*)* to see if you have the right habits to become successful or if you're heading down the path of despair.

Figure 1. The Success Indicator Report makes it easy to see what traits you have.

While formal education can teach you information quickly, you have to take the right courses, which means challenging yourself rather than trying to get through college as easily as possible. After your formal education ends, you should also challenge yourself to keep learning something new. In case you want to teach yourself programming, download a free copy of LiveCode (*livecode.com*) and try LiveCode's simpler syntax. Because LiveCode is far less intimidating than traditional programming languages like C++ and Java, it's easier for most people to learn and use. In fact, many schools around the world are using LiveCode to teach programming (*livecode.com/showcase/?category=industry&tag=education*) to kids of all ages.

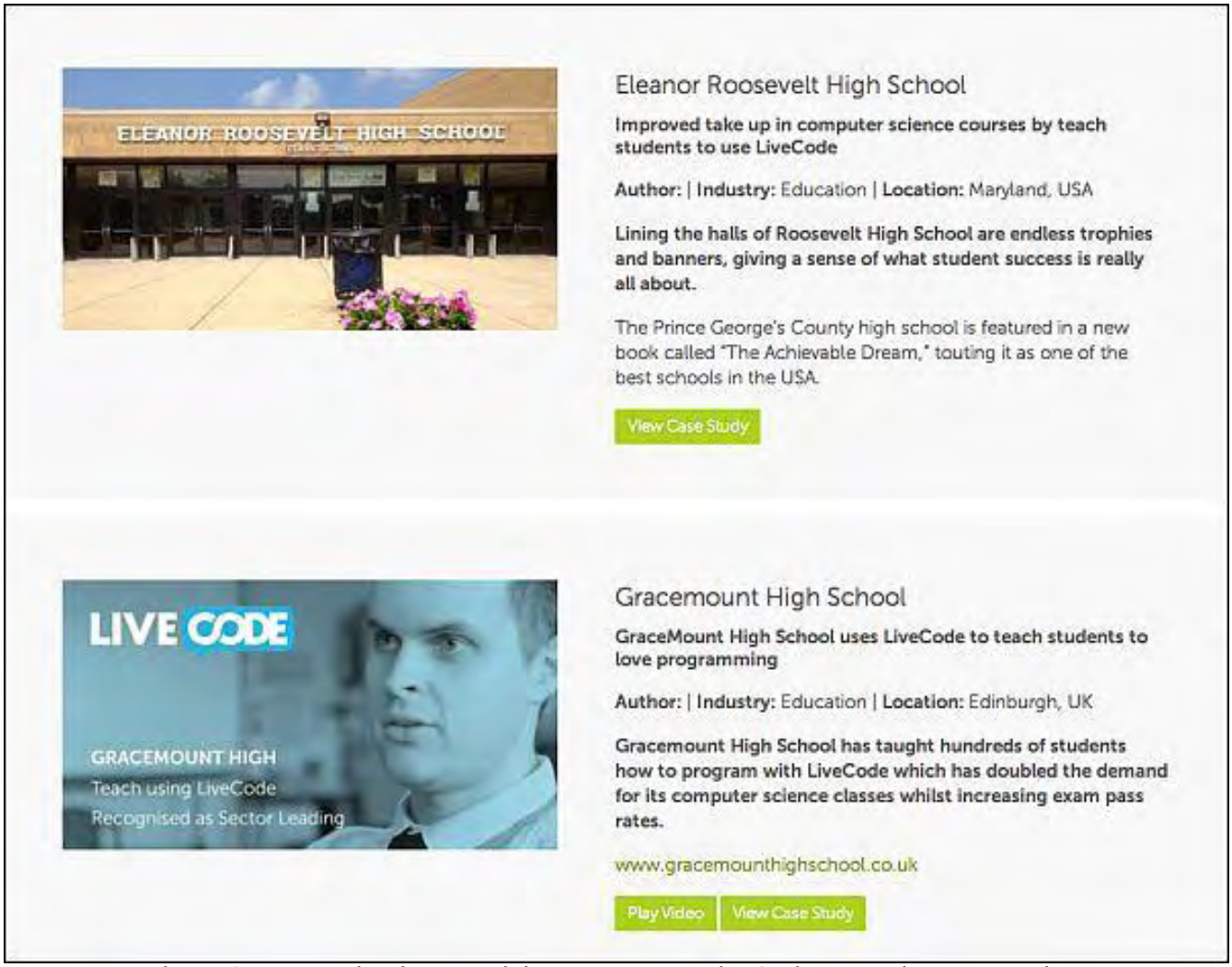

Figure 2. Many schools around the country use LiveCode to teach programming.

Although programming may seem like something only math and science oriented people could possibly learn, anyone can learn programming. If you find formal college courses too frustrating, just discipline yourself to learn on your own. With every country but the United States emphasizing programming in education, anyone who knows programming will have far greater job opportunities in the future.

Ultimately, it all boils down to what you can do for others. If you know how to program, you'll be far more valuable than someone who doesn't know programming at all, and that could spell the difference between having a job or being unemployed.

Classic Games

It's easy to find iOS based games for Scrabble or the Game of Life. However, it's not as easy to find iOS game apps for lesser known games. Since licensing these games is often too expensive, developers

create clone versions of those same games.

One popular battle game is Stratego where players maneuver pieces to capture enemy pieces, avoid bombs, and try to capture the enemy's flag. If you like playing Stratego, you can get a similar iOS version called iBattle (*itunes.apple.com/us/app/ibattle-game/id406423322?mt=8*). iBattle is free, but with in-app purchases, you can buy additional maps and different types of units so you can replace the Marshal piece with an equivalent King piece and so on.

Figure 3. iBattle mimics the Stratego game.

If you ever played the board game Acquire, you'll remember that its goal was for each player to acquire other corporations until you drive your opponents out of business. If you want to play a similar game for iOS, download the McGuire iOS game (*itunes.apple.com/us/app/mcguire/id391242849?mt=8*).

Figure 4. The McGuire app mimics the Acquire board game.

Games don't have to rely strictly on eye-hand coordination. By choosing different types of games, you can learn to think against the computer as you sharpen your strategy skills. By taking your iOS device wherever you go, you can play your favorite board game while waiting in line at a restaurant, doctor's office, or airport terminal. The best part about iOS games is that you won't risk losing any pieces and you don't need to lug around a cumbersome box when you can play your game anywhere you can take your iPhone or iPad.

Cell Phone Coverage Map

If you're unhappy with your current cellular carrier, you may be curious to know if a different one might offer better service in your area. To find out for yourself, you could buy mobile phones from all the cellular carriers and try them out in the areas you frequent most often. However, a better solution would be to download and run the Cell Phone Coverage Map (*itunes.apple.com/us/app/cell-phone-coverage-map/id399701910?mt=8*) app.

By using this app, you can see the coverage for different carriers as reported by their actual customers. Now you can compare Verizon with AT&T along with Sprint, T-Mobile, and Cricket to see how each carrier's coverage compares in the areas you care about the most.

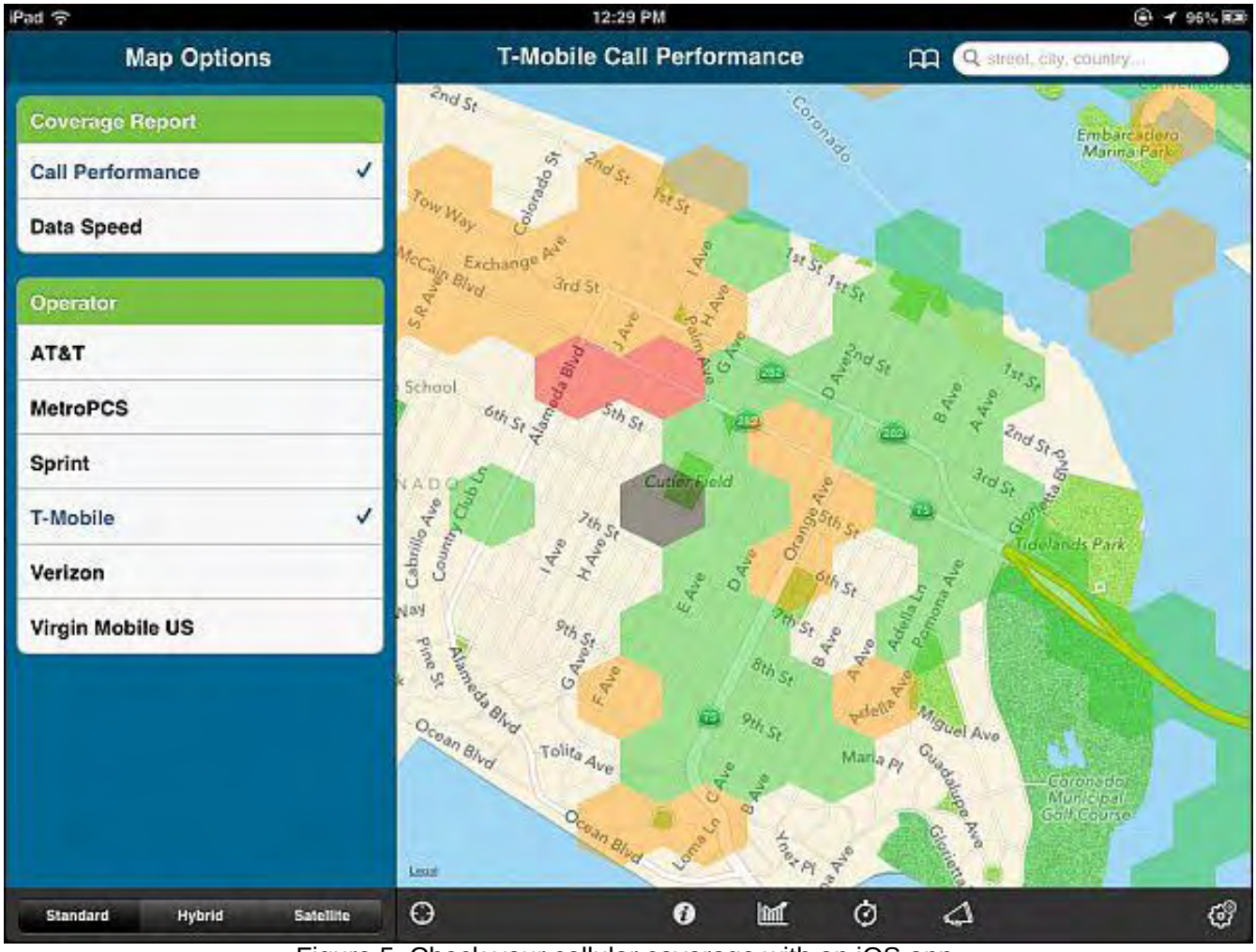

Figure 5. Check your cellular coverage with an iOS app.

3D Printing on eBay

If you want to make money with 3D printing (or at least see one way to profit off 3D printing), download the free eBay Exact app (*exact.ebay.com*), which lets you buy designs that other people have created.

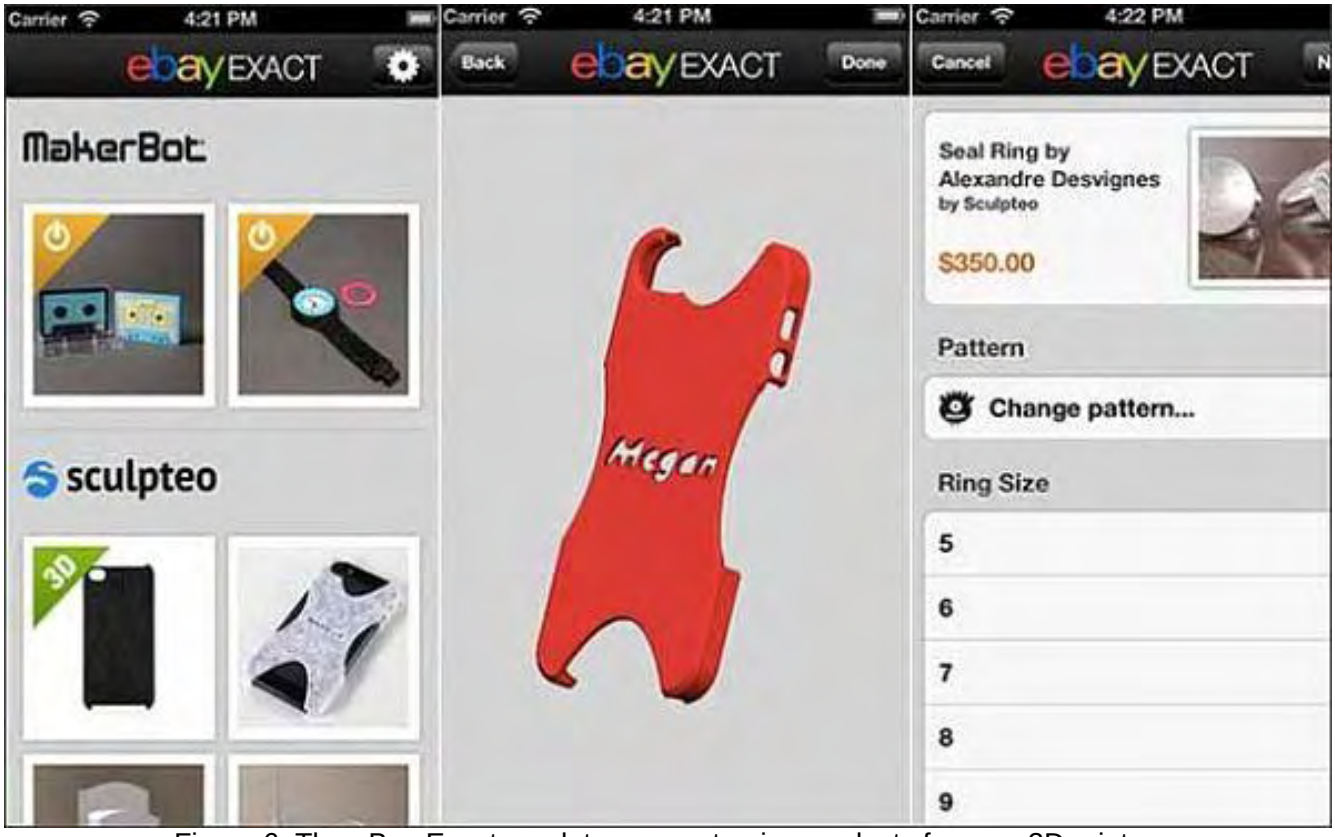

Figure 6. The eBay Exact app lets you customize products for your 3D printer.

By using this app, you can pick products to buy like iPhone cases, and then customize them. After you've customized your item, print it out on a 3D printer and have the product shipped to you. Now you'll have a unique product that nobody else will have. By taking advantage of 3D printing, you can sell products you've designed yourself, or you can have fun customizing other people's products to create items that express your individuality.

3D printing is rapidly coming down in cost and improving in capabilities so you can expect more customizable products to purchase over the years to come. One day, you'll be able to create and "print" practically anything you need. When that occurs, what will happen to all those retail shopping malls? Unless they adapt to becoming social gathering centers, they'll risk becoming obsolete as concrete wastelands in the middle of every community.

* * *

If you have too many program windows cluttering up your screen, you could shut down or minimize each one individually. However, this is slow and tedious. A faster way is to just click on the program menu (such as Safari if you're currently using Safari, or Pages if you're currently using Pages), and when a pull-down menu appears, choose Hide Others. This hides every program's windows but the program you're currently using.

To make other program windows appear again, just click on the program menu again (such as iTunes or Word) and then choose Show All.

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, Lion Edition (*www.amazon.com/gp/product/1593273908/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=217145&creative=399373&creativeASIN=1593273908*)*
*My New iPad 2 (*www.amazon.com/gp/product/159327386X/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=217145&creative=399373&creativeASIN=159327386X*)*
*Steal This Computer Book (*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 and Gerald Fisher (*www.amazon.com/gp/product/1590791894?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=159079189*)*
*How to Live with a Cat (When You Really Don't Want To) (*www.amazon.com/gp/product/B006DJYL70/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=217145&creative=399373&creativeASIN=B006DJYL70*)*
*The Secrets of the Wall Street Stock Traders (*www.amazon.com/gp/product/B006DGCH4M/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=217145&creative=399373&creativeASIN=B006DGCH4M*)*
*Mac Programming For Absolute Beginners (*www.amazon.com/gp/product/1430233362?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1430233362*)*
*Republican Fairy Tales (Children's Stories the 1% Tell About the Rest of Us) (*www.amazon.com/gp/product/B006QSKM3A/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=B006QSKM3A*)*
*The Zen of Effortless Selling with Moe Abdou (*www.amazon.com/gp/product/B006PUFPGI/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=B006PUFPGI*)*
*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*)*
*Erotophobia (A novel) (*www.amazon.com/gp/product/B009POEAJO/ref=as_li_qf_sp_asin_tl?ie=UTF8&camp=1789&creative=9325&creativeASIN=B009POEAJO&linkCode=as2&tag=the15minmovme-20*)*

In his spare time, Wally likes blogging about movies and writing screenplays at his site "The 15 Minute Movie Method. (*www.15minutemoviemethod.com/*)" Wally can be reached at *wally@computoredge.com*.

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Worldwide News & Product Reviews

"The latest in tech news and hot product reviews." by Charles Carr

Online Tech Support Fraud on the Rise; Upcoming game, "Watch Dogs," Closes in on Reality; Magnum Magneat = Magnetically Managed Earbuds.

Online Tech Support Fraud on the Rise

The PMBC Group's (pmbcgroup.com (*pmbcgroup.com*)) Lisa Inouye writes in this week with information on how some online tech support services have been exploiting consumers by billing for multiple charges without fixing the consumer's problem:

Scambook, an online complaint resolution platform, has received over 300 complaints about third-party Web sites advertising tech support for Apple iTunes products, Microsoft Surface tablets, laptops, and other electronics. These scams are on the rise in Florida, New York, Texas, and where the average monetary damage reported to Scambook was $181 with complaints about these companies rising in June 2013.

Reports gathered on Scambook describe two versions of this scam: one where users call a phone hotline and the company requests credit card information to fix the problem; and the others where scammers cold-call consumers convincing them they have a virus and requesting payment as well as remote access to consumers' computers. In these instances, either credit card or personal information is stolen which can be used to commit identity theft.

To avoid being scammed or ripped off by a fraudulent tech support company, Scambook advises the following safety tips:

1. Do not rely on search results to find a company's tech support phone number. If trying to reach Apple, Microsoft or another electronics manufacturer, find this information on the company's official Web site or get it from the device's user manual. Tech support numbers that appear in search results may direct the caller to an unaffiliated, unauthorized third-party site.

2. Do not release credit card information or grant remote computer access to someone over the phone without verifying them. Always read the fine print and all terms and conditions to determine if there may be hidden charges or fees before giving credit card information. Consumers are also cautioned to avoid giving any information, such as computer passwords, to unsolicited callers even if the caller claims to represent a company like Apple or Microsoft.

3. Research tech support companies and repair services online. Search Scambook and other consumer

sites to find out if other users have had negative experiences with the company. Finding online reviews can also help the consumer discover legitimate tech support sites.

More info at Scambook.com (*Scambook.com*).

Upcoming game, "Watch Dogs," Closes in on Reality

Stephen Totilo, who writes for the gaming site Kotaku.com (*Kotaku.com*), writes about the cutting edge AI behind an upcoming open-world game, Watch Dogs:

I'm at a preview of a big game coming from Ubisoft, hoping that it's going to be as terrific as it seems. I can be skeptical, but I'll be damned if I can cease being optimistic. Watch Dogs is looking and sounding good.

They go through the basics, setting up their character—vigilante Aiden Pearce—and their game world—a modern Chicago wracked with crime and heavily networked by a program called CtOS that is responsible for dotting the city with security cameras. The game is open-world. As Pearce, we'll be running around, stealing cars, shooting bad guys, all the stuff you might think of in a Grand Theft Auto, though they don't mention rival series. You'll also be doing a lot of hacking. Hacking the traffic lights, hacking ATMs, hacking cell phones, hacking any piece of electronics in the game to learn things, change things, and use the city as a weapon.

Then they're bragging about their game engine. Specifically, senior producer Dominic Guay is boasting about how much "dynamism" their game engine can allow. At first what he's talking about sounds like the kind of dynamism we've seen in other open world games. But then he starts writing checks that those other games tend not to cash. Here's that bit:

[At] E3 2012, in our demo, the player went to a street corner, hacked a traffic light, caused an accident. That trapped his target. He started a firefight there and then.

Now, theoretically, you could do the exact same thing in any game engine. You could walk up to a street corner, a specific street corner, then you'd hit the button—or not—and a scripted event, something with always the same outcome would happen and there would be an accident. And then if there was a fight…

the [artificially-intelligent enemies] would be predesigned or predetermined to go to certain areas and start shooting at the player. Things would be very predictable in the sense that they would always happen in the same way.

But not in Watch Dogs.

The player can go to any of the hundreds of street corners in our city, Chicago, and if there's a traffic light, he can hack it at any time for any purpose he has. He can do so at any time of day, in any traffic condition with any amount of pedestrians around. And when he does this, will he even cause an accident? I don't know. It depends on the traffic condition. And if there's an accident, the other cars will try steering away, avoiding the accident. At E3 that caused a fire—an explosion—in a nearby gas station. But it could have caused hundreds of other things. Now, some of those drivers will be knocked out, pedestrians will try to help those injured people, some pedestrians might call the cops, the cops on this street corner might try to intervene. If a fight starts there, any of those cars can be used as cover by the player or the AIs. And if the player wants to navigate across this busy intersection, you need to be able to do so in a very fluid manner even though that intersection was basically created out of his own will—his own source of action.

Guay starts promising an exploration of moral gray areas in this game, suggesting that as a vigilante we'll be making decisions about who to help or hurt in this city without being given the spectrum extremes of simply being the nicest or most evil guy around.

They play the game for about half an hour, and one of the first things that catches my eye is how real the city and its people look. Not in some "good lord, look at all the polygons rendering their faces" kind of real, but in a, hey, "people actually dress like this" and "there's grass growing between the cracks of the sidewalk" kind of real.

For example...civilians will notice if you're acting shady and might call the cops, and this will allow you to hack their phone to cancel the call or, as they do in the demo they show me, just knock the phone out of the person's hand. It's such a tiny thing, but knocking a phone out of someone's hand is something I've never seen in a video game. No snark: this is progress!

Watch Dogs does make a very good impression and it's an easy one to root for. Please, let it be different. Please, let it be as refreshing as it seems it can be. My hopes are high.

The game will be out in November for PS3, Xbox 360, Wii U, PC, and eventually for PS4 and Xbox One.

Fascinating piece and online discussion following it. Read it all at kotaku.com (*kotaku.com/the-best-ideas-in-watch-dogs-a-game-that-should-be-on-499661922*).

Magnum + Magneat = Magnetically Managed Earbuds

Product name: Magnum earbuds
Manufacturer: onanoff
Web site: www.onanoff.com (*www.onanoff.com/collections/magnum*)
Price: $39.95

Magneat is low-tech, low-cost accessory for managing the cables of Apple's standard earbuds or third-party counterparts without an embedded splitter or remote control/microphone. It consists of a lightweight plastic spool that has two parts—one with a magnet on its back face and the other with a magnet on its front. In our review last year (*webserver.computoredge.com/online.mvc?issue=3019&article=world*), this accessory's main drawback was that third-party earphones with a splitter or remote control/microphone could not completely wrap around Magneat's spool and thus were susceptible to entanglements which defeat the whole purpose.

Fast-forward to 2013 and you now can get Magneat bundled with onanoff's Magnum earbuds (Figure 1) for about $27 more than Magneat's $12.90 price tag. This bundle comes in a black and grey package (~6" x 3" x 1") made of thin cardboard and clear plastic. The package's back side doubles as a user guide; it has a flap that, upon opening, reveals text on both inner surfaces in five languages (English, French, German, Italian, and Spanish) explaining the product's main features (details momentarily) and how to use the remote. Inside the package is a thin plastic insert molded to hold the contents securely in place. The contents include the Magneat, Magnum earbuds, and three pairs of silicone sleeves—small, medium, and large.

Figure 1. Magnum earbuds come in four colors—black, red, gunmetal, or white—bundled with a Magneat cable management accessory.

Magnum earbuds (which actually might more accurately be called canalbuds (*www.techhive.com/article/2000079/infographic-the-different-types-of-headphones-illustrated.html*) instead) tip the scale at less than half an ounce and have 41" long cables that include a remote/microphone about 4.5" from the right earbud plus a splitter that divides the cables into left and right channels about 8" further down. A thin piece of plastic, about 1/8" long, covers each cable at its junction with the ear piece (presumably to decrease the likelihood of a break). The ear pieces, also made of what feels like plastic, consist of two parts—an inner cylinder-shaped part in one of the four color options (Figure 1) and an outer U-shaped part in black. This product's official specs are as follows.

- 7 mm diameter neodymium driver
- 20 Hz–20 kHz frequency response
- 32 ohms impedance
- silver plated 3.5 mm stereo plug
- sensitivity: 96 dB +/-3 dB at 1 kHz with 1 mW input

What distinguishes these earbuds from Apple's standard ones or other third-party counterparts? One distinctive feature is the cables' braided cloth covering (many competitors come with kevlar or a plastic-y material instead). These cables satisfactorily withstood ordinary (ab)uses during testing; the scope of testing was too brief, however, to determine what these cloth-covered cables' effective lifespan or susceptibility to breakage might be.

Another distinctive feature (and my favorite one) is the ear pieces' labels. The words "LEFT" and "RIGHT" are printed in a white san serif font against the outer pieces' black upper surface, in plain sight and easily legible. This clearly is the best labeling I have seen on audio products. Why can't competitors provide

similar labeling?

The third distinguishing feature of Magnum earbuds is their Love:Jack. This feature is a splitter built into the plug that goes into your music player. As shown in Figure 2, Love:Jack consists of a plastic socket that piggy-backs on the cables' stereo plug into which another audio product's stereo plug can be inserted. Although this feature is distinctive, its usefulness might be limited to couples who enjoy listening to the same music and don't mind their heads almost touching (Figure 3).

How do these canalbuds sound? My impression is that they are better than the original earbuds that came standard with Apple's iDevices, but not as good as higher priced competitors (such as V-Moda's Remix Remotes (*webserver.computoredge.com/online.mvc?issue=2827&article=world*)). Although Magnum earbuds' silicone sleeves afforded good passive noise isolation during testing (ambient sounds were muffled rather than clearly audible), they were not the most comfortable ones I've used. My ears and head began aching slightly within an hour of wearing the medium sleeves (even with the audio volume at a moderate level). Your mileage might vary, and it is worth recalling that the better that the sleeves fit and seal your ear canals, the better the audio quality you'll experience while listening to your tunes.

Figure 2. onanoff's auditory product has several notable distinguishing features, including the Magneat cable management accessory, cables made of braided fabric, and the Love:Jack audio splitter.

Figure 3. Magnum earbuds' Love:Jack feature might be handy for music-loving lovebirds; for others, however, maybe not so much.

My most serious quibble with this product's audio quality, however, pertains to its relative lack of detail. During testing, my impression was that individual instruments (including bass) in my favorite tunes lacked the detail, depth, and richness that are readily discernible with other (albeit more costly) competing products. My impression additionally was that percussion instruments, especially cymbals and tambourines, sounded tinny.

One more notable weakness in the Magnum earbuds pertains to their microphone/remote unit. This unit can be used to control phone calls (answer and hang up) and music (play-pause, rewind, fast-forward). For whatever reason though, volume control evidently is not supported.

Magneat's strengths and weaknesses described in our previous review (*webserver.computoredge.com/online.mvc?issue=3019&article=world*) persisted in the unit bundled with Magnum earbuds for the present review. Its strengths are, in a nutshell, ease of use (Figure 4) and effectiveness in preventing tangled cables. Its primary weakness is that it does not work well with accessories that have a splitter and/or remote/microphone unit (like Magnum earbuds). This is because the cables' length above the splitter or remote/microphone unit cannot wrap around Magneat's spool and thus is susceptible to untidiness and/or knotting which defeats the whole purpose. A minor objection is that Magneat's front piece has a slot intended to hold the cables in place, but needs a retainer mechanism to ensure that the cables stay in place rather than slipping out (which occasionally happened during testing for this review).

Figure 4. Magneat is user-friendly; slide the accessory's two pieces apart, position the back piece inside a garment you're wearing, then position the front one on that garment's exterior until the magnets snap together. This accessory's magnets can hold Magneat in place when used with a t-shirt, dress shirt, windbreaker, light jacket, or pants.

In conclusion, Magnum earbuds bundled with onanoff's Magneat accessory are a cost-effective package for music fans on a limited budget who want to minimize the amount of time spent untangling an audio accessory's cables. This bundle would have been more cost-effective, however, if the remote/microphone unit supported volume control and if the Magneat had a mechanism to accommodate the splitter and remote/microphone unit.

Review contributed by Barry Fass-Holmes

In addition to being an editor and columnist for *ComputorEdge* and *ComputerScene* Magazines, where he has written hundreds of feature articles and cover stories over the past decade, Charles Carr has also penned well over 1,000 non-tech newspaper and magazine articles and columns for various publications, including two widely-read columns each week for San Diego's *North County Times* newspaper.

Carr has covered such diverse topics as pesticide use in area schools, invasive background checks for county volunteers, asthma awareness, the debate over standards-based grading, potential vulnerabilities in electronic voting machines, and Southern California's devastating 2003 and 2007 wildfires. He has also written many humorous pieces.

Carr has also edited dozens of stories and articles written by others which have appeared in major publications and web sites across the country.

He has been a contributor and technical advisor to *L.A. and San Diego Parent* magazines and receives dozens of requests a year to appear on Southern California television and radio stations to talk about important events in the tech world.

Carr has judged many writing competitions including San Diego Press Club and Time-Warner

Communications contests and was sole judge for the national NAPPA Tech Toys awards for five years (which his kids really appreciated). He was recently a judge for the national "Poetry Out Loud" competition.

He has won many writing accolades, including Press Club awards for Best Column Writing, Consumer Writing and Best Arts and Entertainment, and has repeatedly taken top honors in San Diego Songwriter's Guild competitions for his original musical compositions.

Carr will soon publish his first book, *What a World*, a collection of his best writings.

Learn more at *www.charlescarr.com*.

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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

"High Resolution Camera," "Windows 8 Ultimate"

High Resolution Camera

[Regarding the June 28 Digital Dave column (*webserver.computoredge.com/online.mvc?issue=3126&article=dave*):]

Regarding the question from Jerry (6/28) about video. I don't know whether he'd be interested, but the Nikon D800 (just under $3K) has 1080p video, even though it's primarily a still photo camera. The video quality seems pretty good, but I'm not a video guy. The other side of the coin is that it has unbeatable resolution for still shots (36 megapixels), so if he's interested in higher resolution in both still and video, it might be something he'd want to consider.

-Doug Clements

Thanks, Doug, for your information about the high resolution camera. The type of camera I would be interested in is one that would take home movies in the kind of high resolution that you see with today's movies from Hollywood or even the quality you pick up from HD TV channels coming over an antenna. I think your suggestion of camera choice is a good one but what I gather from your info is that your camera still doesn't give what you would call an HD experience. One thing that did ring home was the 3K cost though. Hoping for a less expensive route, but that may not be possible.

Thank you!

-Jerry Michael Hughes, San Diego, CA

Windows 8 "Ultimate"

[Regarding the July 5 Digital Dave column (*webserver.computoredge.com/online.mvc?issue=3127&article=dave*):]

The Ultimate choice no longer exists. Most people will choose the Pro version to get the most features:

"Windows 8 Pro is comparable to Windows 7 Professional and Ultimate and is targeted towards enthusiasts and business users; it includes all the features of Windows 8. Additional features include the ability to receive Remote Desktop connections, the ability to participate in a Windows Server domain, Encrypting File System, Hyper-V, and Virtual Hard Disk Booting, Group Policy as well as BitLocker and BitLocker To Go. Windows Media Center functionality will be available only for Windows 8 Pro as a separate software package." *en.wikipedia.org/wiki/Windows_8_editions*

-Ron Cerrato, San Diego, CA

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