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**The Internet of
(Free) Stuff (IoFS)**

September 26, 2014

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The Internet of (Free) Stuff (IoFS)

Some people think it's all about the Internet of Things, but it's really all about the connections and taking advantage of free Cloud services.

Magazine Summary

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[Digital Dave](#)

by Digital Dave

Digital Dave answers your tech questions.

Port 445 Security Issue in Windows; Windows 8 Loss of Connection; Windows Update Knocked Out My Sound.

[The Internet of Stuff \(IoS\) and Free Cloud Services](#)

by Jack Dunning

Forget the Word Games—Make Free Stuff Work for You

While Internet Cloud services work to capture your business with free online storage, it turns out that each is just a piece of your pie. Yes, you can have it all—free!

[Verifying E-mail Addresses with AutoHotkey](#)

by Jack Dunning

How E-Mail Address Checking Works with AutoHotkey RegEx

There are plenty free Regular Expression (RegEx) examples on the Web. The problem is that they do not all work as advertised.

[Wally Wang's Apple Farm](#)

by Wally Wang

Bet the Company

Bet the Company; Upgrade Operating Systems with Care; Creating E-Books with iBooks Author; HealthKit and Apple Pay; The Confusion Over Apple Pay; The Moon Landing Hoax Debunked; Deleting Old iTunes Backups.

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by Charles Carr, News and Reviews Editor

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KnowBe4 Warning: CryptoLocker Ransomware Spread Through YouTube; iPhone 6 Most Wanted Features: Did Apple Grant Our Wishes?; Kanguru FlashTrust USB 3.0 Flash Drive.

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Digital Dave

“Digital Dave answers your tech questions.” by *Digital Dave*

Port 445 Security Issue in Windows; Windows 8 Loss of Connection; Windows Update Knocked Out My Sound.

Port 445 Security Issue in Windows

Dear Digital Dave,

A couple of weeks ago, I wrote you with a continuing problem where Comodo Firewall was saying, "System is asking for permission to connect to the Internet." You had me look for "errors" and use different browsers/add-ins. Nothing worked, no "errors" shown in log. Even if no browser was invoked, Comodo would come up with this message (which I would always block) whenever I was connected to the Internet.

It was trying to connect to sites in Vietnam, China, Brazil—all over the place (according to "Who Is"). Finally, the only thing I could find in common was that the connection was trying to be made at Port 445 in each case.

I eventually landed on [this article](#) which noted that a gross error by Microsoft results in hackers trolling the Internet for open 445 ports—but closing the Port could create havoc with some functions of the PC. They did suggest using a wired NAT Firewall before any routing and that may help some.

The article may be well worth reading and conveying to viewers herein, if you agree with it. In the meantime, could you suggest what setup I should establish?

AJ

Bonsall, CA

Dear AJ,

It does look like you're being attacked from some seedy locations. I took a look at a number of articles about port 445 and most were from circa 2005. I would think that Microsoft would have resolved the problem by this time, but who knows.

Port 445 is used for sharing (printers and files). If you don't need to share files or a printer

attached to the computer, then you may be able to block the port in your firewall without causing any real harm. Even better would be to block the port in your router (if you have one) which should not affect any local sharing. In Windows Firewall, it looks like the incoming traffic is limited to the local subnet (no outside IPs) (see Figure 2). In these situations, if the port is used internally to access an external location, it is only opened temporarily to the outside world.

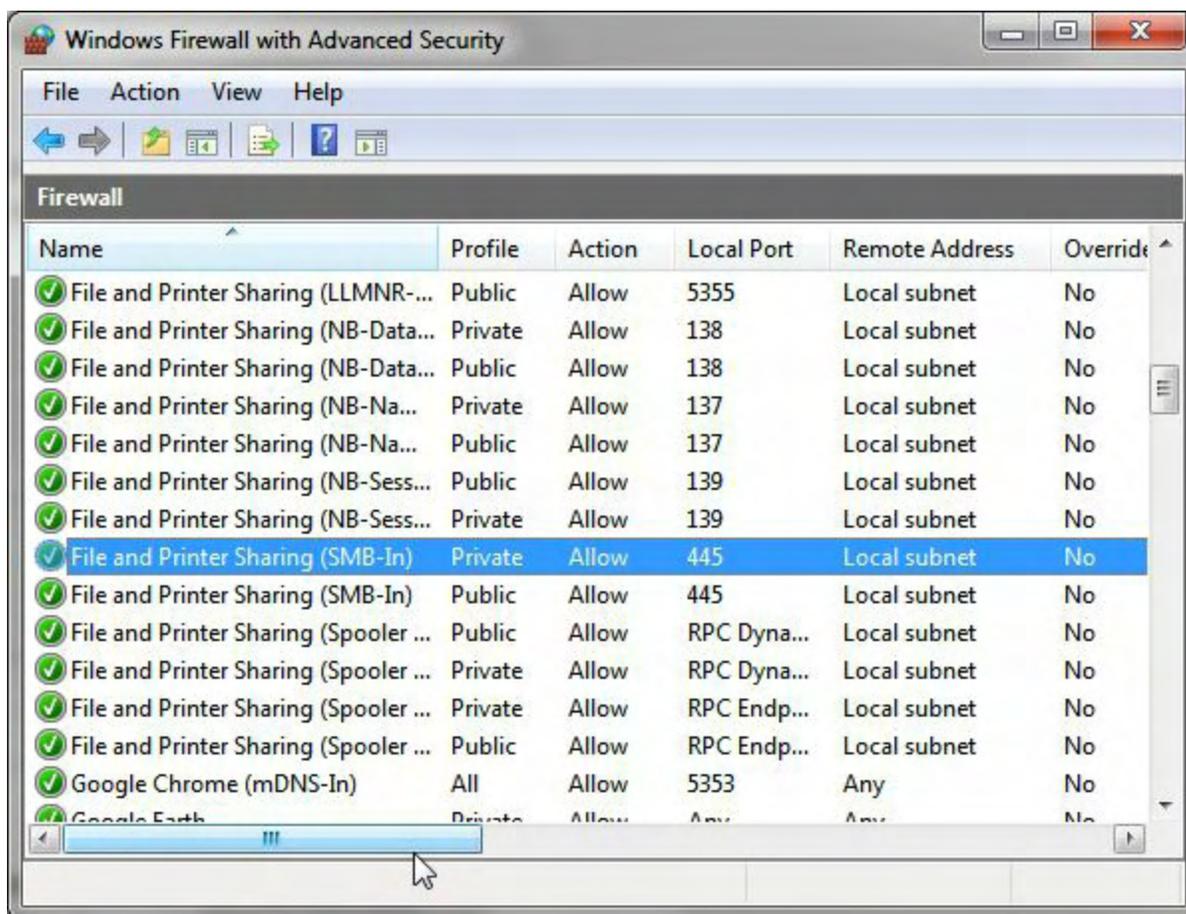


Figure 1. Windows Firewall showing port 445.

I suspect that a setting in Comodo Firewall should do the trick. I found this suggestion: "You need to change your Global Rules from the default settings where you will be asked about incoming traffic to stealth settings.

"Go to Firewall => Stealth Ports Wizard => now choose the option 'Block all incoming connections and make my ports stealth for everyone.' Now your Global Rules are set to stealth and you should no longer be bothered by those requests."

Apparently, the Internet is routinely trolled by malevolent beings looking for open 445 ports. If you put it into stealth mode the trolls will no longer see it.

If you don't have a router, then I would consider getting one for the additional protection. You want a router, even if only one device is connected to it.

Digital Dave

Windows 8 Loss of Connection

Dear Digital Dave,

I'm running Windows 8.1 on a desktop. After Windows wakes up from sleep it doesn't connect to Internet. It stalls on "downloading proxy script." I have to restart to get a connection. I installed "Classic Start 8" which is my best guess is the source of the problem. I really dislike the Modern interface.

Steve

San Diego, CA

Dear Steve,

Classic Start 8 is not necessarily the cause of your problem. I've noticed that I occasionally have connection problems with Windows 8.1 when I first boot the computer. I've found that I need to either use the "Troubleshoot problems" link at the bottom of Control Panel => Network and Internet => Network and Sharing Center or open Change adapter settings on the left-hand side of the same window, right-click on the connection, select Internet Protocol Version 4 (TCP/IPv4), click Properties, then click OK in the new window.

The problem seems to be related to the finding the DNS server which is used to convert text URLs (e.g. www.computoredge.com) into the numeric IP. When I've had this problem the troubleshooter tells me that it's a DNS problem. By opening the Internet Protocol Version 4 (TCP/IPv4) Properties windows and clicking OK, the DNS settings appear to reset. (I have my DNS set to Google's servers—8.8.8.8 and 8.8.4.4.)

I also noted that if I waited a little longer after booting before loading the Web browser, the problem seemed to resolve itself. My browser is always one of the first programs I load, so the delay was annoying.

I haven't seen the problem in a while so I don't know if Microsoft made some changes or if the fact that I rarely reboot and never put the computer to sleep may factor into this. I'm not a fan of the Sleep mode in Windows, but it shouldn't be giving you problems. I'm guessing that it may just need a little more time for all the network settings to recover after a deep snooze.

Digital Dave

Windows Update Knocked Out My Sound

Dear Digital Dave,

With a recent Windows 8.1 update, My sound card got messed up and will not load properly. I have tried System Restore, but it appears that whatever happened, System Restore is not functioning and the Control Panel program will not load properly, along with several other Windows programs.

I have an HP Pavilion D7 laptop purchased in May 2014 and run Windows 8.1. I am not thrilled with Windows 8.1 and much prefer Windows 7, but at this point all I want is the sound back and fully functional Windows programs.

The laptop is out of warranty, I am retired and on a limited budget, so any help would be appreciated.

Thank you for any assistance you can give me.

Kent Hill

San Diego, California

Dear Kent,

It certainly sounds like you have more problems than just the sound card. If that were the only issue I would suggest update the drivers for the sound board. However, since System Restore and the Control Panel are not operating properly, I suspect that the systems itself is corrupted. Hopefully, you created a Recovery Drive with a flash drive or DVDs.

It may be time to refresh the operating system. This can be done through "Update and recovery" (a Modern Interface app), but it is a little obscure to find. You can open "Settings" in the Charms bar or use the +i shortcut to open "Settings" directly. Then, at the very bottom of the "Settings" menu which opened on the right side is the option "Change PC settings." This will open the open "PC settings." Select "Update and recovery" from the bottom of the list. Click the "Recovery" link. From there you have three options: Refresh your PC without affecting your files; Remove everything and reinstall Windows; and Advanced startup (see Figure 1).

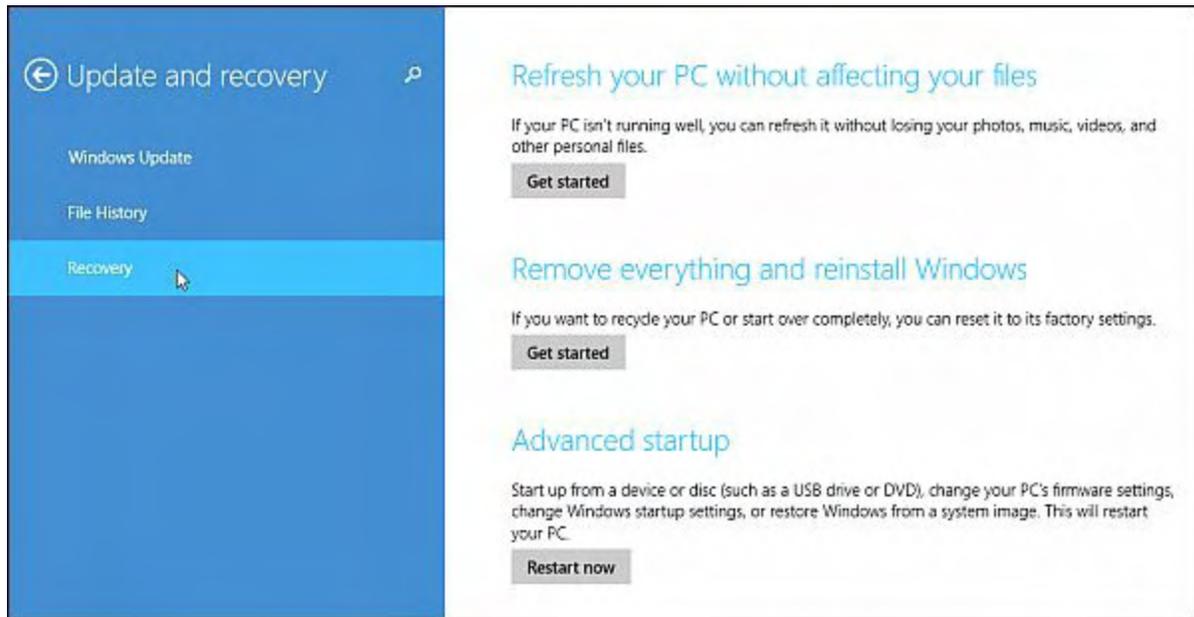
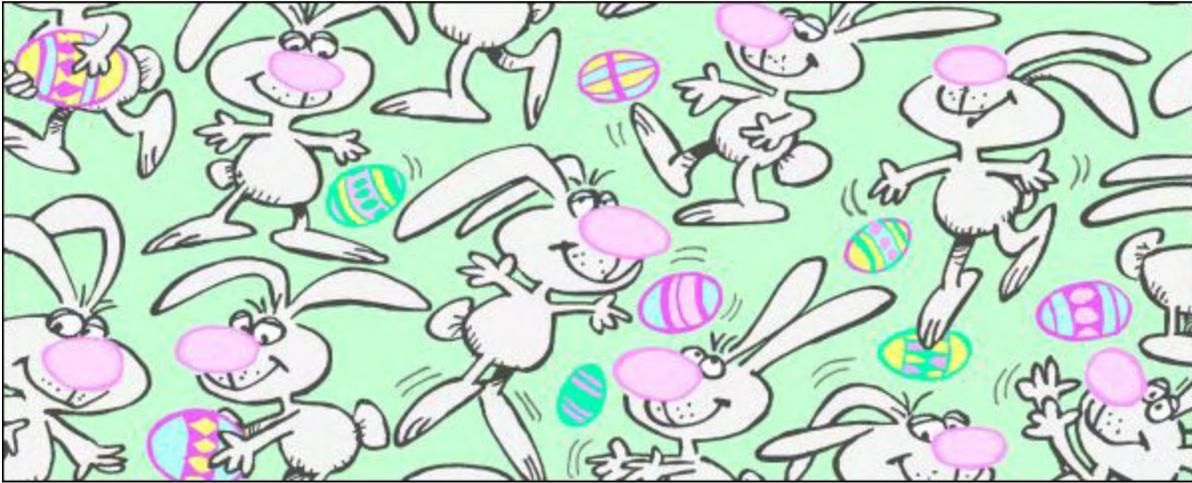


Figure 2. Recovery in "Update and recovery" give three options.

I would try the "Refresh" first which uses the system partition to copy over corrupted system files. If that doesn't work and you happen to have made a system image, then you could give Advance startup a try. The third option is to start all over with "Remove everything and reinstall Windows." If nothing else works, then this is your last resort. In that case, you will need to reinstall any programs. (Important: Be sure to backup any files you want saved to external storage (USB drive, flash drive, Dropbox, or other Cloud storage) before reinstalling Windows.

It seems odd that your computer would be out of warranty. Usually HP warranties are at least a year—but I'm no expert on HP warranties.

Digital Dave



The Internet of Stuff (IoS) and Free Cloud Services

“Forget the Word Games--Make Free Stuff Work for You” by Jack Dunning

While Internet Cloud services work to capture your business with free online storage, it turns out that each is just a piece of your pie. Yes, you can have it all—free!

The latest technospeak to hit the cyberworld is the [Internet of Things](#) (see Figure 1, by [Wilgenbroed on Flickr](#), via Wikimedia Commons). I find this term particularly annoying since it is so bland and boring that it will become banal in no time. It may as well be the Internet of Stuff (IoS)—not to be confused with iOS, the Apple operating system. I might even like Homer Simpson's "InterWeb" which at least invokes some humor while creating an image of a web of interconnections. But I get little say in the matter. I wasn't consulted before the cyber gurus decided that the next big thing would be called the "Internet of Things." (I'm still wondering what happened to [Web 3.0](#). Of course, I never really understood [Web 2.0](#). Web 4.0 is when people "unfriend" anyone who uses the terms "Web 3.0" or "Internet or Things." Web 4.0 is here when everyone gets bored with the whole thing and just reads a book printed on real paper.)



Figure 1. The Internet of Things (IoT), also known as the Internet of Stuff (IoS), InterWeb, or, possibly, Web 2.0.3.2.

I would prefer to use the term "Web of Internet Connected Devices" or "WEBINCONDEV" which is a much more accurate description of what is happening. The changes in the world of computers are all about connections. Things just happen to be at one end of those connections. The lonely single computer is becoming a relic of the past. The machine is now more commonly hooked up to other computers and specialized devices for easy communication. That connection may be Bluetooth, Wi-Fi, or through the Internet. But, I suggest that we forget all about the labels that people use and take a look at what's actually happening. The world is changing around us and we are participating—maybe without even realizing it. I started looking at how I use computers and the Internet today compared to just a few years ago.

Connecting Stuff Together

I've been using a virtual office for years. Servers at remote locations host the *ComputerEdge* Web site and e-mail. I wrote a bunch of Web programs to edit and post the columns and articles. Since the content and programs were all on the Web the editors and I could work from anywhere in the world. But it seems that those capabilities necessary for business are now only a part of how I use Internet connections.

Wi-Fi Has Changed the World

The Internet connection whether into the house or business has been around for decades in the form of the modem—whether the old slowpoke devices, cable modems, or DSL modems. In the beginning, people primarily surfed the Web and exchanged e-mail. There may have been a local network available, but it was usually hardwired and used to share an Internet connection. While it was possible to share data between machines, the functions for doing so were limited to mapped drives and data backup. If people used multi-monitor setups, it was by adding a second screen to a computer. To use a remote printer required either a hardwired Ethernet connection on the printer or sharing the printer through another computer.

In those days people started running network cable throughout new construction. It was considered the best way to computerize a house. It was a little expensive, but far cheaper than running cable through a non-wired structure. In older buildings people punched holes in walls and ran the cable under the carpet. In businesses the false ceilings were loaded with a mass of networking cable running from a central server to each office. Wi-Fi networking changed all that.

Today, network cabling is only put in for those systems that require higher security, more reliability, and the faster speeds offered by a hardwired installation. The first option is now is Wi-Fi which is as simple as connecting a wireless router to the primary Internet connection—still a modem. All the local computers, printers and other Wi-Fi capable devices can be added directly to the network without any extra effort or installation. Wi-Fi has become the first link to the Internet and the world for most computers and smart devices. The router is now the second link shared through Wi-Fi.

My Computer Network

I have three computers hooked up to my local network. Only one of them is a direct connection to the router and that's only because it happens to sit next to it. The other computers use Wi-Fi. When operating the connected computers in Windows, they all look and respond the same way regardless of whether connected directly to the network or via Wi-Fi.

I have a printer connected directly to the router—not just because it sits next to the router, but also due to the fact that it has no Wi-Fi capability (it's an older printer). However, since it is a Wi-Fi router, the Wi-Fi computers can use that same network printer without going through

another computer.

Today, even if I only had one computer and printer, I would have many reasons to set up a home network—especially Wi-Fi. But Wi-Fi alone has not changed many computing habits. It's the integration of many different Internet connected devices and services which when coupled with Wi-Fi have revolutionized how I operate with the technology.

Internet Storage Systems

While I wasn't looking for it at the time, the Internet storage systems such as [Dropbox](#), [Box](#), [Google Drive](#), [Microsoft OneDrive](#), and [Apple's iCloud](#) have wormed their way into my life. The great thing about these services is they all offer free storage space. Most offer at least 5GBs free. Dropbox only offers 2GBs, but there are many ways to increase the free total up to 20GB. (There are many other Cloud storage services available—all offering free online disk space—which only increases the possibilities.)

By signing up for free Cloud accounts, it's easy to increase your storage capacity and sharing capability. Think of it like flash drives in the sky. By today's standards each service may not provide a huge amount of storage, but when you add them all together it can be significant. All it takes is a little bit of organization to keep track of it all. I've favored assigning specific types of tasks (not things) to specific services. For example, there are a number of chores I routinely do with Dropbox.

Making Use of Dropbox

Dropbox was the first Cloud storage that I actually started using. It was originally recommended by *ComputerEdge* readers. While it only comes with 2GBs of free storage, I was able to increase my account to over 19GBs through links on *ComputerEdge*. (Thank you *ComputerEdge* readers!) Dropbox is not so much a storage system as it is a way to share. It was one of the first systems to make it easy to install on almost any type computer or device. I installed it on a Mac, a few PCs, an iPad, and an Android device. It has provided a number of advantages.

The way Dropbox (and most other Cloud services) work is there is both a Web interface and an app which can be installed on your computer or device. If the app is installed it looks just like another drive on your computer—accessible in the same way. When a file is added to the drive, it is automatically uploaded to the Cloud. The service then downloads the same file to every connected device as they become available. (Whether a file is actually downloaded to every device depends upon the service and device. Some smartphones and tablets may only read files from the Internet since the local storage is severely limited.)

One of the first ways I used Dropbox was to set up folders for each issue of *ComputerEdge*.

Whenever I received articles or columns from writers, I added it to the appropriate folder. This made remote sharing with editors easy. (I wrote a [short AutoHotkey script](#) which automatically creates the Dropbox *ComputerEdge* issue folder and allows the selection of files to copy to the new folder.) This Dropbox process is now a regular part of the editorial system.

Next, I began putting personal photos on Dropbox. The primary reason for this was to make new pictures accessible to my wife without needing to print them. She doesn't use the computer, but wanted to see pictures we took of the grand kids without waiting. (The screen on the camera is too small for proper appreciation of the images.) I merely take the SD chip from the camera, insert it into a computer, and copy the new photos to Dropbox. Dropbox transfers the photos to the iPad where my wife (or anyone else) can easily view the snapshots. Since the iPad can easily be passed from person to person, Dropbox sharing is a easier and natural sharing system than forcing people to huddle around a computer. You might think that smartphones would be just as good for sharing photos, but very few people will let someone else hold theirs. It's too personal. If someone who does not have access to my Dropbox account wants to see the photos, then I can e-mail a sharing link.

I know that there are smartphones and cameras which directly upload photos, as well as systems such as [Flickr](#), [Snapfish](#), and [Google's Picasa](#) providing free Cloud storage for images, but I haven't bothered with any of that...yet. This photo sharing approach works for when I receive pictures from friends and relatives via e-mail. I just save them to Dropbox for later viewing on the iPad.

Another important use I make of Dropbox is the *ComputerEdge* [AutoHotkey download site](#) (see Figure 2). I could have used one of the Web servers for download services, but Dropbox is easier to update and clean up.

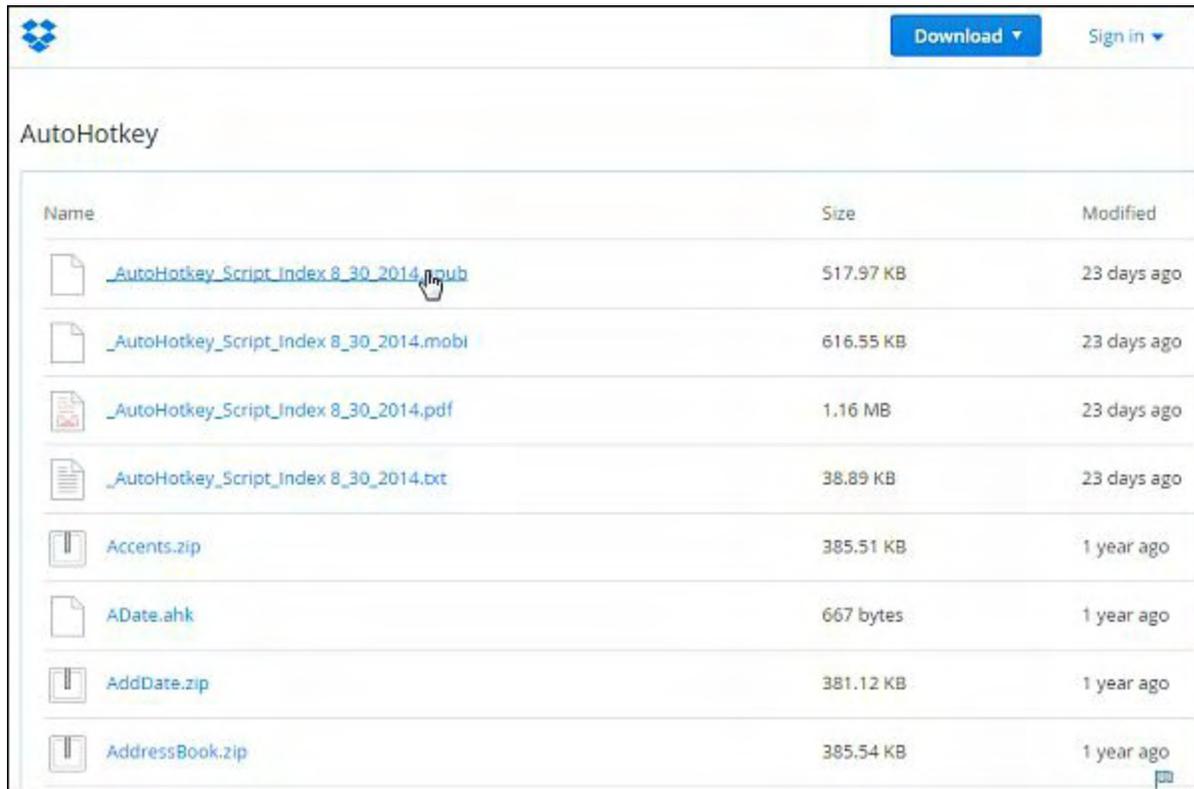


Figure 2. The link to the ComputerEdge AutoHotkey Dropbox site opens a Web page with all the AutoHotkey script downloads.

Since Dropbox appears as a folder on all my computers, I can transfer files from my main AutoHotkey folder to the download site by copying the current version to that folder from any computer. I've even set up a right-click routine in Windows Explorer for adding any file directly to the Dropbox AutoHotkey folder (see Figure 3).

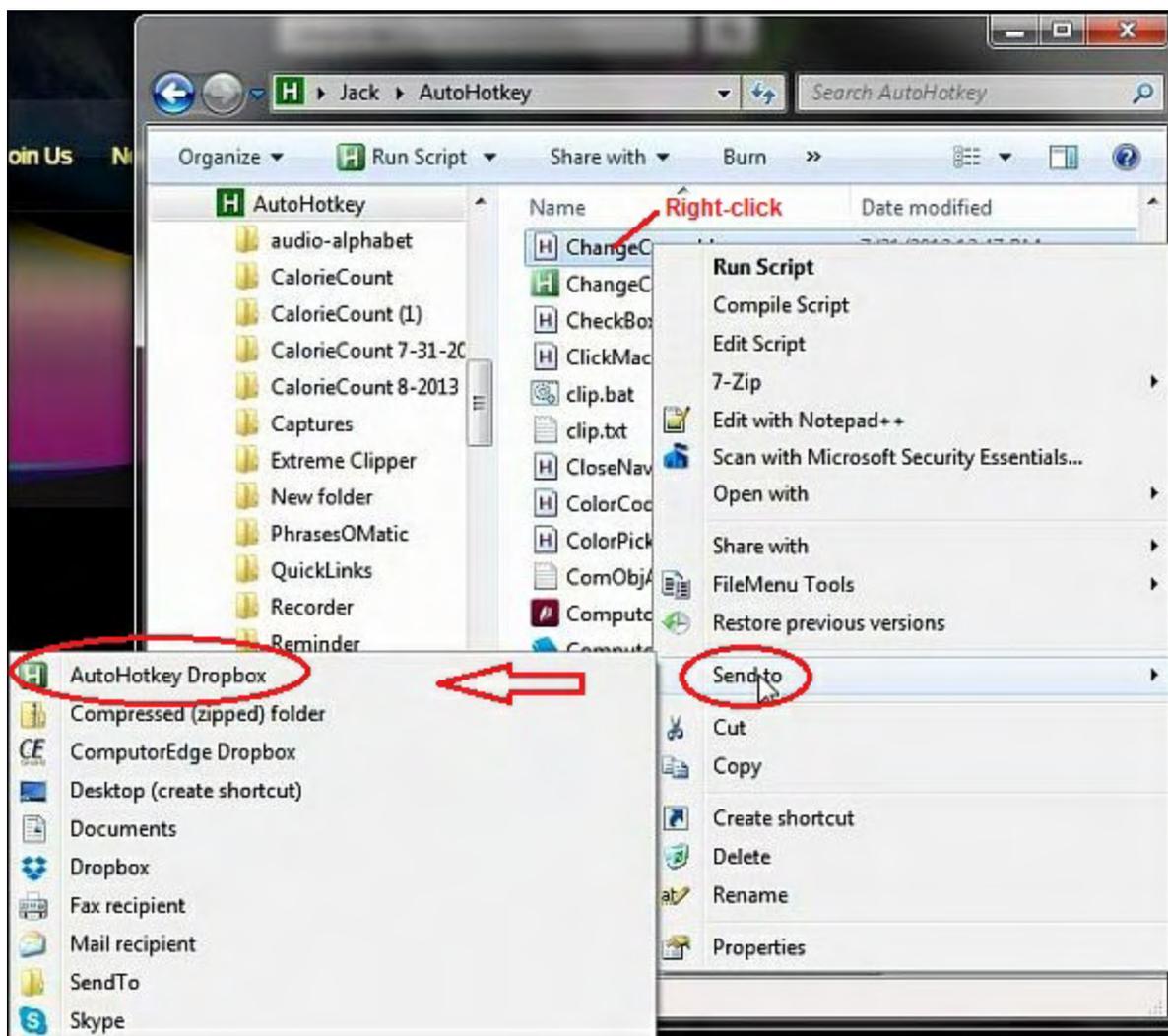


Figure 3. Right-click on any file in Windows Explorer to use SendTo for directly copying the file to the AutoHotkey download site.

(This technique for adding items to folders such as the AutoHotkey Dropbox with SendTo in the Windows Explorer right-click context menu is discussed in "[Utilizing the Windows SendTo Feature](#)" as well as *Windows 7 Explorer Secrets* in the four e-book bundle of [Windows 7 Secrets](#).

My Box Cloud Storage

When I [bought my new laptop](#) it came with 25GBs of free Box Cloud storage. I had never used the service before and noted that it was touted as more business oriented. As I was setting up the new computer, I realized that I needed a way to maintain master files across all of my computers. In the past I always designated one computer as holder of originals, but I decided that I would [try using Box](#) for that purpose. I had already loaded enough on Dropbox, so why not give Box a shot?

I now store the *ComputerEdge* editorial issue folders, the e-book files, and Web program files on Box. It seems to be working out pretty well, although I've mapped the Box Sync folder on the laptop directly to my main desktop computer to avoid the lag caused by the relative slow syncing with the Web.

One advantage to using the separate Box Cloud service over Dropbox is that the iPad and Mac (where I have not installed Box) are not subjected to the extra automatic addition of incompatible files to their onboard storage.

Google Drive as an Alternative ComputerEdge Archive

We recently ran out of space on the service which hosts *www.computeredge.com*. This URL server is primarily a redirect site to *webserver.computoredge.com* and host for special AutoHotkey pages. We use the storage on this system for serving images and archive files. This takes bandwidth load off of the main Web servers (which primarily send text) keeping the site relatively fast. Some files needed to be deleted or moved. I opted to place a few of the early archive PDF files on Google Drive as the start of a new [Google Drive ComputerEdge Archive](#) (see Figure 4).

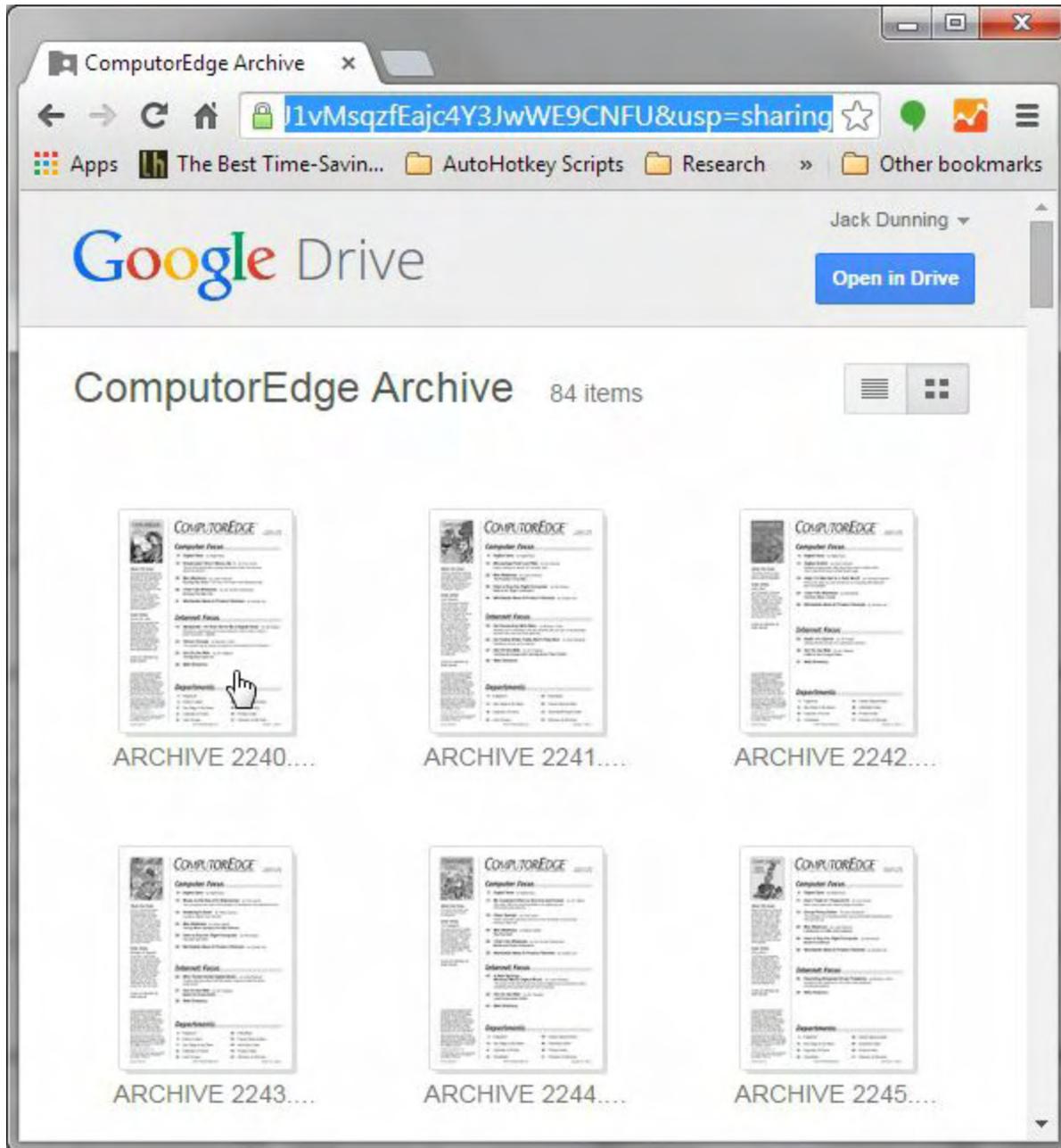


Figure 4. So far, only containing 116 ComputerEdge PDF files starting in October 2004, Google Drive shows thumbnails of the first page.

One of the strengths of Google Drive is the built-in interface for reading PDF files. Click on a thumbnail and the file opens (see Figure 5). Dropbox has similar features, but again I don't want to send these PDF files to all the Dropbox devices.



Figure 5. A PDF file can be read without leaving the shared Google Drive page. Click on the right arrow to view the next documents. The link near the bottom left opens thumbnails of the files displayed across the bottom of the page.

This *ComputerEdge* archive on Google Drive is a work in progress and I will need to integrate it with the *ComputerEdge* Web site. At this time it is merely a storage point for some of the much older PDF files. These are all in black and white and include the smaller ads from those passed days (no full page ads). I wonder where those businesses are now.

I haven't done much with Microsoft's OneDrive and nothing with Apple's iCloud. I haven't found the need, but if it's convenient I may use them in the future. The plans by Microsoft, Apple, Google, and others to use free online storage to produce customer loyalty seem to be going awry. Rather than locking in people with one service, it's getting easier to switch or even better use both. Even Apple's iCloud works with PCs and there are [workarounds](#) to make it work with Android.

Why Not Have It All?

One of the great things about Cloud storage services is that you can have it all—accumulating hundreds of gigabytes of online storage free. Despite the plans of the providers, there is no incentive to stick with only one when you can use different platforms for different purposes. It isn't all about what you connect to cyberspace (the Internet of Things), but how easy it is to

use the services that make the connections. With Wi-Fi everywhere, more and more devices to connect, and free services for connecting and storage, there are no decisions to make. Get it all and use what works.

Jack is the publisher of ComputerEdge 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:

Recently released is Jack's FREE AutoHotkey book, [AutoHotkey Tricks You Ought to Do with Window](#), available exclusively at ComputerEdge E-Books in the EPUB for e-readers and tablets, MOBI for Kindle, and PDF for printing formats.

ComputerEdge E-books offering is his [AutoHotkey Applications](#), an idea-generating intermediate level e-book about using the AutoHotkey Graphical User Interface (GUI) command to write practical pop-up apps for your Windows computer. (It's not as hard as it sounds.)

[Hidden Windows Tools for Protecting, Problem Solving and Troubleshooting Windows 8, Windows 7, Windows Vista, and Windows XP Computers.](#)

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 and Digging Deeper Into AutoHotkey.](#)

Our second compilation of stupid *ComputerEdge* cartoons from 2011 and 2012 is now available at Amazon! [That Does Not Compute, Too! ComputerEdge Cartoons, Volume II: "Do You Like Windows 8 or Would You Prefer an Apple?"](#)

Special Free Offer at ComputerEdge E-Books! [Jack's Favorite Free Windows Programs: What They Are, What They Do, and How to Get Started!](#)

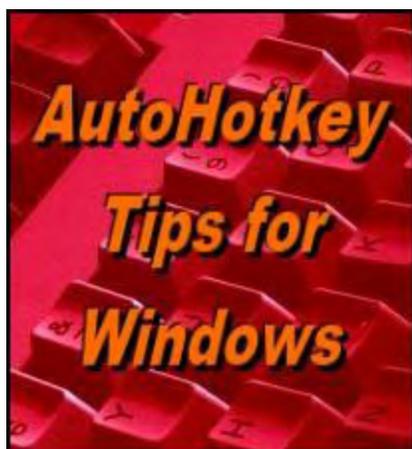
[Misunderstanding Windows 8: An Introduction, Orientation, and How-to for Windows 8 \(Seventh Edition\)!](#)

[Windows 7 Secrets Four-in-One E-Book Bundle,](#)

[Getting Started with Windows 7: An Introduction, Orientation, and How-to for Using Windows 7,](#)

[Sticking with Windows XP—or Not? Why You Should or Why You Should Not Upgrade to Windows 7,](#)

and [That Does Not Compute!](#), brilliantly drawn cartoons by Jim Whiting for really stupid gags by Jack about computers and the people who use them.



**Yet, One More
Reason to Use
AutoHotkey
Free Software!**

Verifying E-mail Addresses with AutoHotkey

“How E-Mail Address Checking Works with AutoHotkey RegEx” by Jack Dunning

There are plenty free Regular Expression (RegEx) examples on the Web. The problem is that they do not all work as advertised.

One of the best uses of Regular Expressions (RegEx) is for checking the formatting of data—especially e-mail addresses which can be particularly difficult to type without making errors (unless a person is using AutoHotkey hotstring substitution). By using RegEx in AutoHotkey, script writers can eliminate many user errors (a bad e-mail address) which can cause problems down the line. If the formatting does not match, the data is not accepted.

In this column I look at a Regular Expressions for validating e-mail addresses and break expression down to understand what it does and possible deficiencies. I found this one on the Web and copied it as an example in an earlier column. However, as I started to analyze the RegEx I saw that it fell short in a number of areas. I made some adjustments to improve it, but ultimately I may need to switch. I spend time on this particular RegEx because sometimes it's just as important to understand how something *doesn't* work as how it does.

A second RegEx (discussed next week) I took from the *ComputerEdge* Web page for signing up for e-mail subscriptions. I wrote this RegEx a number of years ago in JavaScript. (I most likely copied it from another long forgotten source.) While it serves the same purpose, it's cleaner and more comprehensive than the first RegEx.

If you are new to writing an AutoHotkey RegEx, then you may want to check out this simplified ["Introduction to Regular Expressions."](#)

Testing a RegEx

The only way to truly learn how Regular Expressions work is to test them. I use the following short AutoHotkey script to run various expressions:

```
Haystack := "jackdunning@computoregde.com"
FoundPos := RegExMatch(Haystack, "^[a-z0-9_\. -]+@([\da-z\.-]+)\.([a-z\.] {2,6})$", ne
```

```
msgbox %FoundPos% %newvariable%
```

This snippet could be more elegant by adding a GUI with two input fields, but editing the script with Notepad is almost as quick. It's just a matter changing the input (*Haystack*) or the RegEx (found between the two double quotes) in the [RegExMatch\(\) function](#), saving the file, right-clicking on the filename in Windows Explorer, then selecting Run Script. If the RegEx is valid the e-mail address displays in the message box. If not, it displays 0 (see Figure 1).



Figure 1. If the e-mail validation routine works, the message box displays the address. If not, the message box displays zero.

If you keep your text editing and Windows Explorer windows open and side-by-side, then it is easy to make changes, then test the RegEx. Everything discussed in this column can be found in the AutoHotkey [RegEx Quick Reference](#).

RegEx E-mail Address Validator Number One

The first RegEx for testing e-mail addresses which I found somewhere on the Web is as follows:

```
FoundPos := RegExMatch(Haystack, "^[a-z0-9_\. -]+@([\da-z\.-]+\.[a-z\.]{2,6})$", ne
```

It was not written for AutoHotkey, but operates in almost the same manner. Here is how it works.

The caret ^ found at the beginning of the expression is a beginning (or front end) anchor. That means there must be a match at the beginning of the string to be valid. If not, the RegEx will fail (return 0). This prevents the match from starting somewhere inside the data string.

Looking at the end of the RegEx we see the \$ character. The dollar sign \$ found at the end of

the expression is an end (or terminating) anchor. That means there must be a match at the end of the string to be valid. If not, the RegEx will fail (return 0). This prevents the match from ending somewhere inside the data string. Between the circumflex (^) and dollar sign (\$) a RegEx can be completely enclosed to ensure that there are no improper characters at either the beginning or end of the expression.

The parentheses "(...)" creates a group which may indicate order of evaluation, capture special features, or change options. Unfortunately, these particular sets of parentheses appear to serve no purpose in this RegEx. Remove them and it works the same way. In the second RegEx (discussed next week) the parentheses serve an important purpose.

The first range `[a-z0-9_\. -]+` accepts any lowercase letters, numbers, the underline mark, dots, and hyphens. The plus sign + tells the RegEx to continue accepting the characters within the preceding range until something not in the range is encountered—in this case, either an invalid character or the @ sign. (Note: The backslash \ used to escape the dot is not required within a range in AutoHotkey. Only characters with special meaning within a range require escaping to serve as a raw character. The RegEx range works in the same manner with the backslash removed.)

Since the @ sign is on its own, it is required somewhere in the e-mail address (and only once) to be valid. This is the most useful feature of this RegEx since every e-mail address much contain the @ character.

After the @ sign, the RegEx `[da-z\.-]+` matches the same range as was use in the first range, lowercase letters and digits, plus the dot and hyphen, but no underline mark. For some reason, \d was used in place of 0-9 which both mean the same thing.

The RegEx `\.([a-z\.] {2,6})$` is supposed to determine the end (\$) anchor) of the e-mail address (extensions such as .com, .org, or .uk). However, it appears to have an error. The first single dot \. matches the require dot before the extension, but including it again in the following range not only allows double dots, but the entire address could end with a dot—which would never be found in an e-mail address. The \. within the range should be removed to prevent dots at the end of the address.

The `{2,6}` following the range tells the RegEx that the minimum number of characters accepted from the preceding range is 2 and the maximum number is 6. This ensures that the e-mail address extension is at least two letters and no longer than six letters.

The problems with this RegEx continue. It is still possible to start the e-mail address with a dot, have a dot appear before or after the @ sign, and double dots may occur anywhere within the e-mail address. It turns out that this RegEx is not nearly as useful as I thought. I did add `[\W]` to the beginning of the RegEx to prevent any non-alphanumeric characters for occurring at the beginning of the e-mail address. (`\W` with a capital W means any non-alphanumeric character.) When `\W` is preceded with the caret ^ inside the range it means *not* (anything except those characters), but this is a double negative. The double negative works, although an

easier way to express it is `[\w]` (lower case w) which accepts only an alphanumeric character.

I also added `[^.]` just before the `@` character to prevent a dot at that location (not a dot), `[\W]` after the `@` sign to prevent non-alphanumeric characters from being accepted, as well as another `[^.]` before the last dot to prevent a double dot just before the extension.

This fixed a number of problems with the original RegEx, but it was just becoming more and more convoluted:

```
^[^\W] ([a-z0-9_.-]+) [^.]@ ([^\W] [\da-z.-]+) ([^.]\. [a-z]{2,6} [^\W])$
```

Plus there was still a problem with double dots appearing almost anywhere else within the RegEx. Rather, than proceeding further with this one, it was time to switch directions and look at the RegEx e-mail address validation I use with the *ComputerEdge* Web subscriptions form:

```
^\w+ ([\.-]?\w+)*@\w+ ([\.-]?\w+)* (\.\w{2,4})+$
```

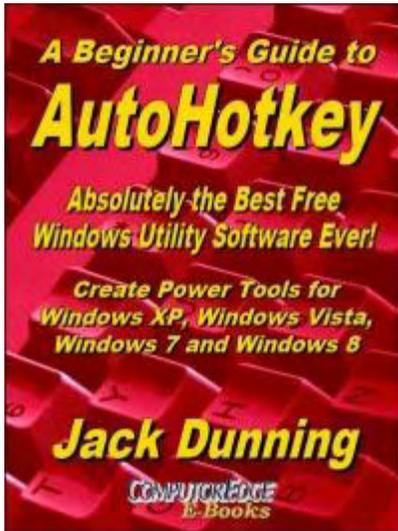
It turns out that this expression does a much better job with e-mail addresses. There is one significant difference which makes it work much better which I'll discuss next time—or you can figure it out yourself.

The moral of the story is, "Don't expect that a RegEx you find on the Web will work as advertised." There are many ways to do the same thing, but some are simpler and more effective. Check out a RegEx by testing before using it.

* * *

Free! [AutoHotkey Tricks You Ought To Do With Windows!](#) This e-book includes both those tips and the reference material (Table of Contents and indexes) from the other three AutoHotkey books. Pick up a copy free and share it with your friends.

* * *



The second edition with more chapters and an index to the AutoHotkey commands found in the book is available in e-book format from Amazon (and other formats—EPUB and PDF— at the ComputerEdgeBooks Web site linked below). 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*](#) (preferred, EPUB format for iPad, Android, and computers; MOBI for Amazon Kindle; and PDF for printing) offers a gentle approach to learning AutoHotkey. (Also available from [Amazon](#) for the Kindle and Kindle software on other devices.)

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.

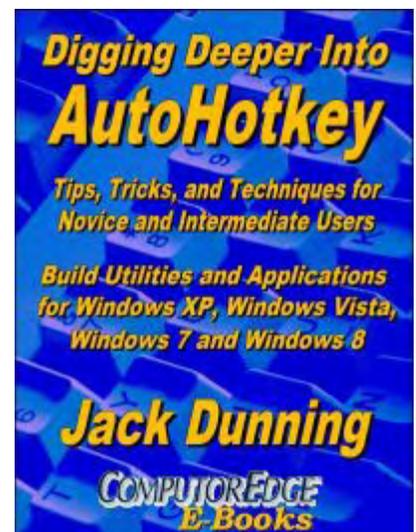
Based upon the series of articles in *ComputerEdge*, Jack takes you through his learning experience as he explores writing simple AutoHotkey scripts for adding repetitive text in any program or on the Web, running programs with special hotkeys or gadgets, manipulating the size and screen location of 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!](#)

[For a PDF version for printing on letter size paper for inclusion in a standard notebook of A Beginner's Guide to AutoHotkey click here!](#)

* * *

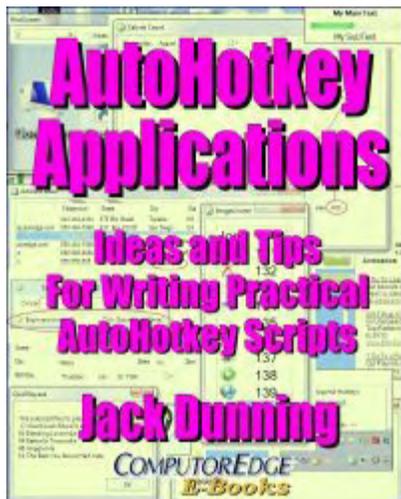
Jack's second AutoHotkey book, [*Digging Deeper Into AutoHotkey*](#) (preferred, EPUB format for iPad, Android, and computers; MOBI for Amazon Kindle; and PDF for printing) is comprised of updated, reorganized and indexed columns from *ComputerEdge* is now available. Since the columns were not all written 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*](#). However, if a person is reasonably computer literate, they could go directly to this book for ideas and techniques without the first book. (Also available from [Amazon](#) for the Kindle and Kindle software on other devices.)



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* * *



Jack's third AutoHotkey book [AutoHotkey Applications](#) (preferred, EPUB format for iPad, Android, and computers; MOBI for Amazon Kindle; and PDF for printing) is an intermediate level book of ideas and applications based primarily on the AutoHotkey GUI command. The book emphasizes practical applications. The book is not for the complete beginner since it builds on the information in the other two books. However, if a person is reasonably computer literate, they could go directly to this book for ideas and techniques without the other books. There is an extensive index to the ideas and techniques covered in the back of the book. (Also available from [Amazon](#) for the Kindle and Kindle software on other devices.)

[For an EPUB \(iPad, NOOK, etc.\) version of AutoHotkey Applications click here!](#)

[For a PDF version for printing on letter size paper for inclusion in a standard notebook of AutoHotkey Applications click here!](#)

Jack is the publisher of ComputerEdge 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:

Recently released is Jack's FREE AutoHotkey book, [AutoHotkey Tricks You Ought to Do with Window](#), available exclusively at ComputerEdge E-Books in the EPUB for e-readers and tablets, MOBI for Kindle, and PDF for printing formats.

ComputerEdge E-books offering is his [AutoHotkey Applications](#), an idea-generating intermediate level e-book about using the AutoHotkey Graphical User Interface (GUI) command to write practical pop-up apps for your Windows computer. (It's not as hard as it sounds.)

[Hidden Windows Tools for Protecting, Problem Solving and Troubleshooting Windows 8, Windows 7, Windows Vista, and Windows XP Computers.](#)

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 and Digging Deeper Into AutoHotkey.*](#)

Our second compilation of stupid *ComputerEdge* cartoons from 2011 and 2012 is now available at Amazon! [*That Does Not Compute, Too! ComputerEdge Cartoons, Volume II: "Do You Like Windows 8 or Would You Prefer an Apple?"*](#)

Special Free Offer at ComputerEdge E-Books! [*Jack's Favorite Free Windows Programs: What They Are, What They Do, and How to Get Started!*](#)

[*Misunderstanding Windows 8: An Introduction, Orientation, and How-to for Windows 8 \(Seventh Edition\)!*](#)

[*Windows 7 Secrets Four-in-One E-Book Bundle,*](#)

[*Getting Started with Windows 7: An Introduction, Orientation, and How-to for Using Windows 7,*](#)

[*Sticking with Windows XP—or Not? Why You Should or Why You Should Not Upgrade to Windows 7,*](#)

and [*That Does Not Compute!*](#), brilliantly drawn cartoons by Jim Whiting for really stupid gags by Jack about computers and the people who use them.



Wally Wang's Apple Farm

“Bet the Company” by Wally Wang

Wally Wang's Apple Farm

Bet the Company; Upgrade Operating Systems with Care; Creating E-Books with iBooks Author; HealthKit and Apple Pay; The Confusion Over Apple Pay; The Moon Landing Hoax Debunked; Deleting Old iTunes Backups.

If you were running a highly profitable company, would you risk drastically changing your main product in search for even greater sales and profits? Coca-Cola tried that by [changing the formula](#) for their soft drink and then had to backtrack when people didn't like the new flavor.

Any time you introduce change to your current product line, you always risk alienating current customers with no guarantee of attracting newer customers. Back in the Midwest, a restaurant chain called [Bill Knapp's](#) catered to lower middle class people. Over the years, their clientele got older and gradually died off without being replaced by newer, younger customers.

To attract new, younger customers, Bill Knapp's decided to revamp their image and menu. To save money, they stopped making food from scratch and relied on food services to deliver pre-made meals instead.

Not surprisingly, the older clientele rebelled against these changes and left. Also not surprisingly, these changes failed to attract new, younger customers who still saw Bill Knapp's as a place for grandparents to eat. The end result was that Bill Knapp's wound up driving their remaining customers away without attracting any new ones.

Now consider the wisdom behind Steve Ballmer when he boldly proclaimed he was going to "[bet the company](#)" on Windows 8 that could maintain Microsoft's desktop PC market while also capturing the growing tablet market. Was anyone really surprised at the outcome after Windows 8 arrived?

Like Bill Knapp's, Windows 8 drove away Microsoft's current customers while failing to attract newer ones. For Steve Ballmer to "bet the company" on a product no longer looks like a wise business decision but more like a desperate gamble that a bankrupt homeless person might rely on in a Las Vegas casino.

Why risk the entire company on a drastic change when it would have been far easier to improve Windows 7 and release a separate tablet operating system derived from the Windows Phone operating system that was already running on smartphones?

Imagine if McDonald's decided to stop selling low-cost, fast food and switched to selling gourmet steak and seafood meals at premium prices. Would they maintain their current customers and attract newer ones? Of course not. Current customers would be confused and switch to other restaurants to get fast food while potential new customers would shy away from McDonald's reputation as nothing more than a seller of cheap fast food.

If you want to drive away your current customers, change your main product so it no longer meets your current customers' needs. If you want to avoid attracting new customers, maintain your current brand name and image that still represents what new customers don't want.

If Steve Ballmer had wanted to destroy Microsoft's reputation and future, he couldn't have picked a better strategy than to "bet the company" on trying to sell one product to two different markets. PC users want to maintain their current skills and knowledge in using Windows because it's taken them years to master the complexity of Windows. Tablet computer users want an easy to use interface that doesn't bog them down with the complexity of Windows. Windows 8 gives neither side what they want.

While Steve Ballmer cheerfully wanders off to own the Los Angeles Clippers, he's left behind a seriously damaged Microsoft that has to dig its way out of the massive hole created by Windows 8. Of course, Microsoft die-hard enthusiasts will remain loyal to Windows because their only other option is to switch to something else, and how can you switch to anything else if you've spent a lifetime trying to convince everyone that Windows will always be the best operating system in the world for all of eternity? Given a choice between beliefs and reality, you can see how reality never stands a chance.

Upgrade Operating Systems with Care

Any time a new version of an operating system appears, it always pays to be patient. First, you never know what annoying bugs the new version might introduce. Second, and more importantly, not all software will be compatible with the new version. If you rely on a program and suddenly it stops working when you update your operating system, you won't be able to use your critical software any more.

To update to iOS 8, you need approximately 5GB of free space on your iPhone/iPad. If you don't have that much free space, the easier alternative is to connect your iPhone/iPad to your computer, download the iOS 8 update through iTunes, and then let iTunes install iOS 8 on your iPhone/iPad even if you have less than 5GB of free space available.

Before you decide to update to iOS 8, check to make sure your favorite apps will work. Just

tap the App Store icon on your iPhone/iPad and tap the Updates icon. Now look for updates to your favorite apps that specifically mention iOS 8 support.

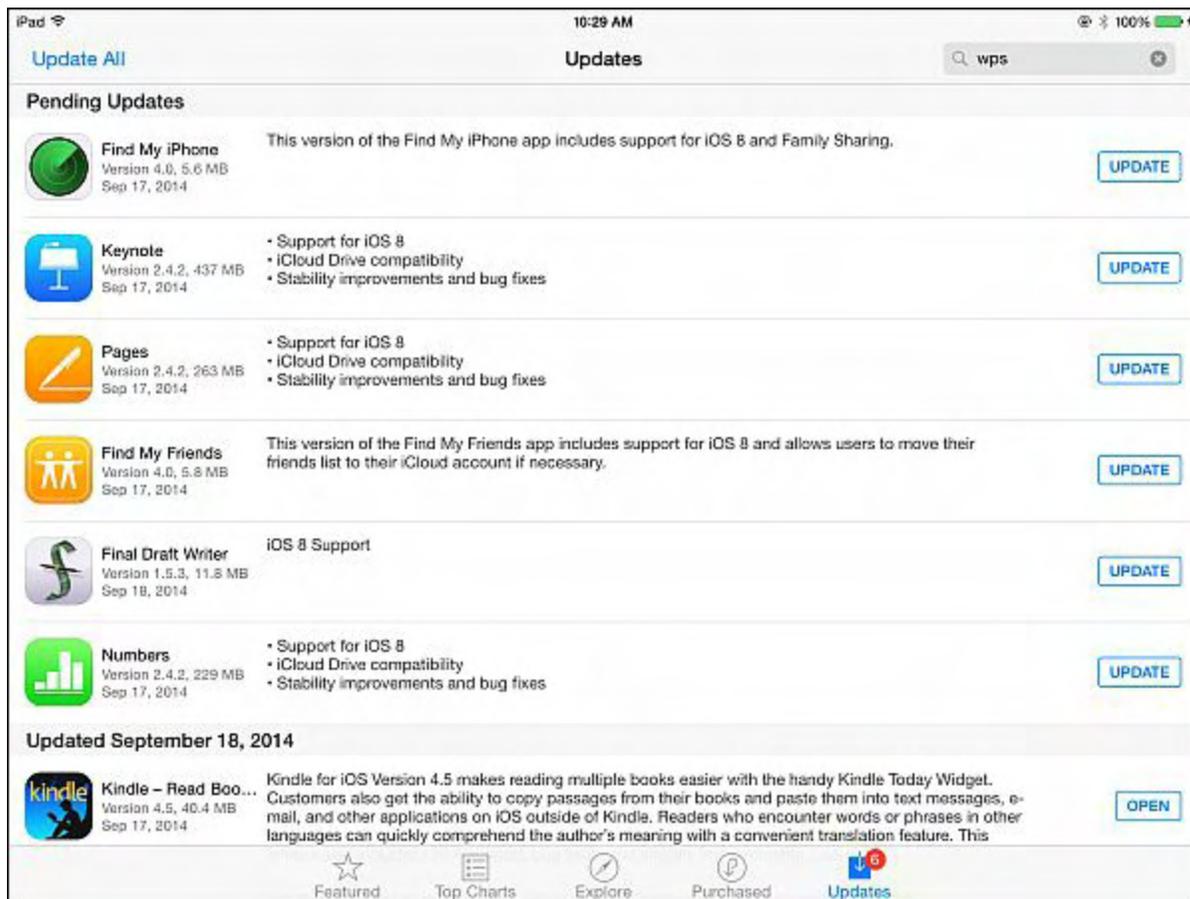


Figure 1. The latest app updates should include support for iOS 8.

If your favorite and most frequently used apps don't offer iOS 8 support, you may not want to take the chance of upgrading to iOS 8 only to find your favorite app no longer works. You might politely contact the app publisher to see when they expect to offer iOS 8 support, or to get reassurance that the app will work with iOS 8 already with no need of any updates.

Remember, nobody really cares about the operating system as much as they care about what programs they can run on that operating system. With iOS 8, take your time upgrading since iOS 7 will still work perfectly fine for as long as you own your iPhone/iPad. Once you know for sure that your favorite apps will run on iOS 8, that's the time to finally upgrade.

Creating E-Books with iBooks Author

When Apple introduced their free [iBooks Author](#), they positioned it as a tool for creating interactive iBooks. Unfortunately, such interactive iBooks can only run on the iPad or Macintosh, which leaves out a huge market of people using Windows PCs, smartphones, and Android tablets.

In case you're willing to sacrifice interactivity for universality, you can also use iBooks Author to create PDF files. Such PDF files obviously lose any ability to offer audio, video, or interactivity, but the advantage is that iBooks Author formats text and graphics in a book-like appearance instead of the scrolling paper appearance of a word processor document.



Figure 2. iBooks Author can create appealing book layouts.

To see how to take advantage of the free iBooks Author program, download and view either the iBooks file or the PDF file of a brochure created by the non-profit group called Border Angels. (Download [Border Angels.iBooks](#) (8MB) and [Border Angels.pdf](#) (2MB).) Whether you agree with the position of Border Angels or not, you can see how much nicer a PDF file can look when organized using the simple page layout features of iBooks Author.

By using iBooks Author, you can choose from a variety of book templates and save them as PDF files. Since iBooks Author comes with different templates, you should be able to find a template that most closely matches your needs.

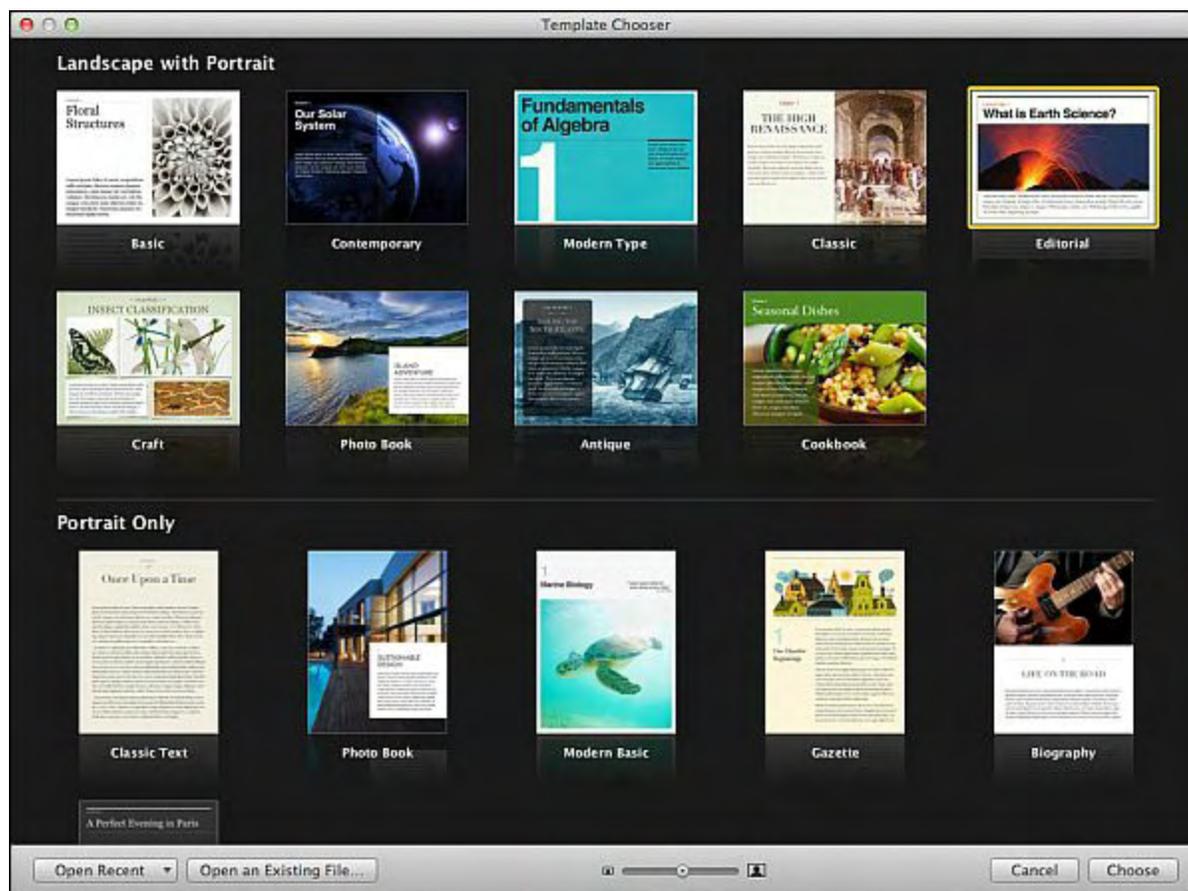


Figure 3. iBooks Author offers different templates for designing the pages of a book.

The next time you need to create a PDF file, don't settle for the boring layout of a typical word processor. Get creative and use iBooks Author. It's free, it's far easier to use than a desktop publishing program like Adobe InDesign, and it lays out information in a more visually interesting format than ordinary word processors.

Spending a lot of money on software won't make you more productive. Sometimes you can be productive using free software and a little imagination. Money may be limited, but creativity knows no bounds except for those who refuse to look beyond their pre-conceived notions.

HealthKit and Apple Pay

To protect a user's privacy, Apple announced that iOS 8 will include [privacy protections](#) that makes it impossible for Apple to decrypt any encrypted data stored on an iOS device. Now a government agency can't force to Apple to unlock a user's device to access their data.

One reason for this sudden emphasis on privacy is that Apple plans to roll out HealthKit and Apple Pay soon. The whole idea behind HealthKit is to store fitness data such as your heart rate, blood pressure, and vitamin level. Obviously keeping such personal data hidden from others is crucial for people to trust using HealthKit in the first place.

With Apple Pay, Apple needs people to trust that their personal data can't be accessed without their consent. The more people trust Apple to keep their data safe, the more likely they'll trust using Apple Pay. After Apple announced that they could no longer decrypt data even under pressure from a government agency, Google announced that the latest version of Android will be able to [do the same thing](#).

Unfortunately, some questions still remain over the protection of data in Google's Android. While Android will have encryption turned on by default (like iOS 8), Android devices tend to lag further behind than iOS when it comes to adopting the latest operating system version. As a result, they'll be far more insecure versions of Android out in the wild than secure versions.

A more serious problem is that Google's whole business model for Android is based on tracking personal data. When a company like Google has a financial incentive to peek at customer data, it's hard to believe they'll also have an incentive to keep your data secure from even their own prying eyes. It's still possible, but it's like trusting an arsonist to make sure your house doesn't catch on fire.

Ultimately, no data can be completely safe from prying eyes, but encryption can make it harder for snoops to peek at your data without your permission. In the future, expect bugs and security flaws to allow people to peek at your data anyway, but at the very least, these new security initiatives by Apple and Google should help make you aware of keeping your data as secure as possible from everyone, including your own government.

The Confusion Over Apple Pay

Tech Times recently published an article claiming that people would [adopt Apple Pay](#) simply because Apple created it. That kind of pointless argument makes no sense whatsoever since Apple also [created Ping](#), a social network that nobody used until Apple dumped it two years after they created it.

CNet claims people won't adopt Apple Pay due to [security concerns](#). Yet with highly publicized breaches of security through Target and Home Depot, it's already been proven that current credit cards are highly insecure. If people really are fearful of security breaches, the last thing they should do is cling to today's insecure credit card systems and avoid anything that promises to be better.

The real reason people might adopt Apple Pay has nothing to do with Apple and more to do with the security measures that Apple Pay requires before allowing a purchase. The key is that Apple Pay can verify your fingerprint and your physical location at the time of the purchase. Any other form of payment that can't verify your identity and your location is far less secure such as an ordinary credit card.

How can someone spoof Apple Pay without your fingerprint and iPhone 6 or Apple Watch to

verify your location at the point of sale terminal? They can't do it easily. In the past, hackers have breached computers in Target and Home Depot to steal credit card numbers stored on merchant computers. Apple Pay never reveals your credit card data to merchants so there's no way hackers can steal your Apple Pay data by breaking into insecure merchant computers.

Hackers could still break into Apple's computers but if they just have your credit card data without fingerprint verification and location verification, it becomes harder to make purchases with any stolen data.

Google Wallet has been around for two years but not all Android devices offer fingerprint scanners to verify your identity. Instead, Google Wallet relies on less secure PIN codes that can be stolen. To gain acceptance, Google Wallet needs to require all Android devices to offer fingerprint scanners (or some other way to identify the valid credit card holder). If someone steals your Android phone and knows your PIN code, they could potentially make fraudulent charges on your Google Wallet account. If someone steals your iPhone 6, they can't spoof your fingerprint as easily as stealing a PIN.

The Japanese have been using mobile phones to make payments for [more than a decade](#) so Apple Pay is simply making mobile phone payment common to the rest of the world. If you look at the iPhone 5S, you could see Apple planting the seeds of Apple Pay with the iPhone 5S fingerprint scanner.

When Apple introduces a product, it's often a stepping stone to a larger purpose. When other companies introduce a product, it's often a rushed copycat version of a more popular product, or a feature-laden monstrosity packed with the latest technology but with no clear purpose for using any of it. With few exceptions, Apple tends to have a long-term vision. With few exceptions, most other companies do not.

The Moon Landing Hoax Debunked

For decades, conspiracy theorists have claimed that NASA faked the entire Apollo moon landings. One of their claims is based on the idea that photographs supposedly taken on the moon would be much darker when astronauts appeared in the shadows. To demonstrate their video processing chip capabilities and see if moon landing conspiracy theorists had a valid point, graphics processing leader Nvidia decided to recreate the conditions on the moon using software.

Nvidia used their GTX 970 and 980 graphics cards to bounce, diffuse and reflect simulated light in real-time. Then based on the same conditions on the moon, Nvidia rendered the image to recreate astronaut Buzz Aldrin descending in the shadows of the Apollo moon landing. The rendered image nearly perfectly matches up with the actual NASA photograph.



Figure 4. Nvidia's rendered image looks identical to NASA's actual photograph.

Moon landing hoax supporters claim that if Buzz Aldrin were in the shadow of the moon lander, he would also appear dark. However Nvidia found that Neil Armstrong's reflexive spacesuit reflected the light on to Buzz Aldrin, allowing him to be seen slightly illuminated despite being in the shadow.

When mathematics creates a fake image that looks nearly identical to the real image, it's hard to insist that this particular photograph could have been faked in a movie studio. Yet despite facts, expect moon landing conspiracy theorists to continue clinging to their beliefs because what they want to believe is more important than acknowledging anything that contradict their beliefs.

If it's impossible to convince conspiracy theorists that photographs of astronaut footprints, moon lander tracks, and American flags on the moon still don't prove Americans actually landed on the lunar surface, you can see how facts can never change some people's minds.

The next time someone tells you their beliefs, confront them with contradictory data and watch them get angry at you for pointing out those facts. Rather than dispute any uncomfortable information, they'll simply get mad and refuse to talk to you any more, all while still spouting their beliefs that can't be objectively verified. When you run across people who cling to beliefs by avoiding the truth, you have to wonder if maybe cockroaches might be smarter than some human beings after all.

* * *

The iTunes program originally started off as a way to manage digital music files, but somehow morphed into an all-purpose program for connecting an iOS device to your computer. The problem is that iTunes has become more complicated to use and understand. One purpose of iTunes is now backing up your iOS devices but such backups gobble up hard disk space. In case you want to save a little hard disk space, consider deleting any backups of your iOS devices that you no longer need. (Note: Be careful of deleting any backups that you do need.)

Start iTunes, click the iTunes menu, and choose Preferences. Now Click the Devices icon to see a list of iOS device backups stored in iTunes. If you spot any old or unnecessary backups, delete them to save space. If you're not sure if a backup might still be useful or not, don't delete anything just to play it safe.

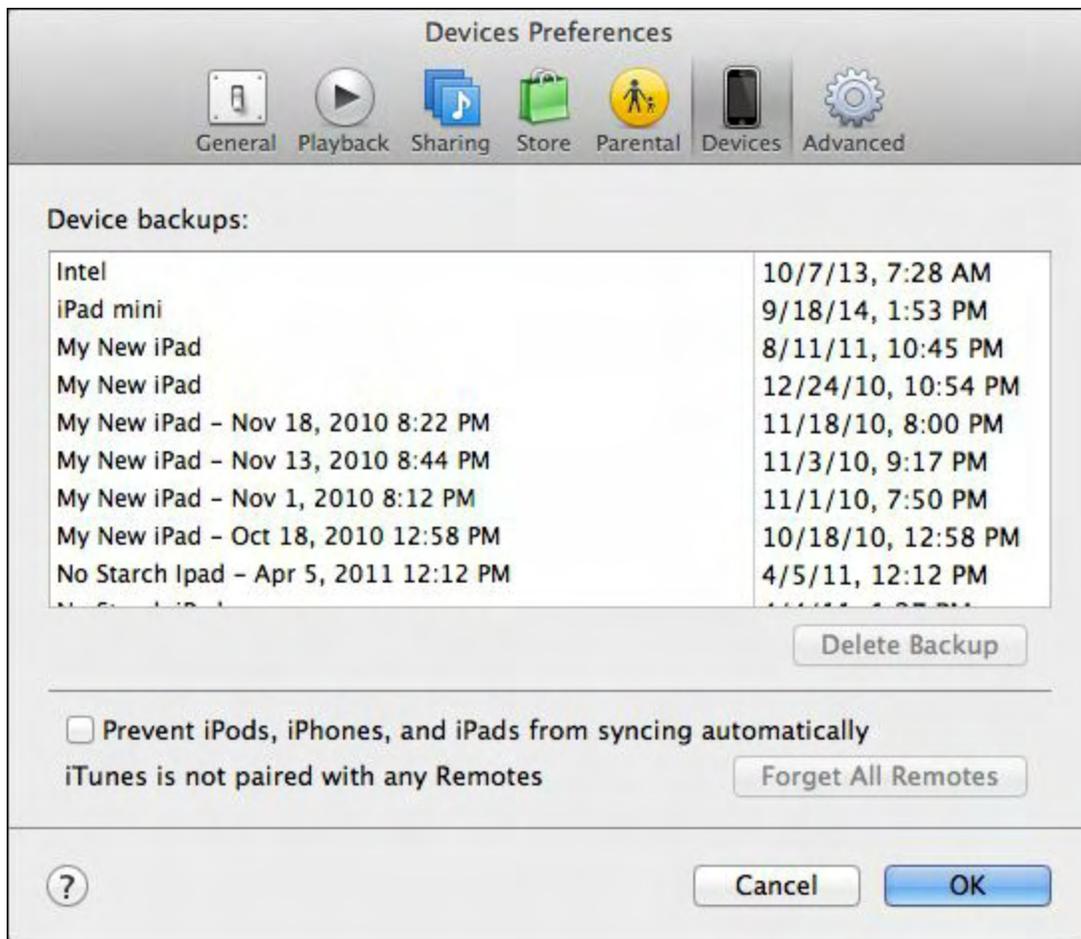


Figure 5. You can delete old iOS backups within iTunes.

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:

[Microsoft Office 2013 For Dummies](#)

[Beginning Programming for Dummies](#)

[Beginning Programming All-in-One Reference for Dummies](#)

[Breaking Into Acting for Dummies with Larry Garrison](#)

[Strategic Entrepreneurism with Jon and Gerald Fisher](#)

[How to Live with a Cat \(When You Really Don't Want To\)](#)

[The Secrets of the Wall Street Stock Traders](#)

[Mac Programming For Absolute Beginners](#)

[Republican Fairy Tales \(Children's Stories the 1% Tell About the Rest of Us\)](#)

[The Zen of Effortless Selling with Moe Abdou](#)

[The 15-Minute Movie Method](#)

[Erotophobia \(A novel\)](#)

[Math for the Zombie Apocalypse](#)

[How to Write a Great Script with Final Draft 9](#)

[How to Write a Great Script with Fade In](#)

[The Elements of a Great Script: Star Wars](#)

[The Elements of a Great Script: Die Hard](#)

[The Element of a Great Script: Back to the Future](#)

[The Elements of a Great Script: Rocky](#)

[The Elements of a Great Script: It's a Wonderful Life](#)

In his spare time, Wally likes blogging about movies and writing screenplays at his site "[The 15 Minute Movie Method](#)," finding interesting news stories about cats at his site "[Cat Daily News](#)," giving advice to authors who want to self-publish e-books at his site "[The Electronic Author](#)," and providing the type of advice he wishes someone would have told him when he

was much younger at his [personal Web site](#). Wally can be reached at wally@computoredge.com or you can follow him on Twitter [@wallacewang_com](#).



Worldwide News & Product Reviews

“The latest in tech news and hot product reviews.” by Charles Carr, News and Reviews Editor

KnowBe4 Warning: CryptoLocker Ransomware Spread Through YouTube; iPhone 6 Most Wanted Features: Did Apple Grant Our Wishes?; Kanguru FlashTrust USB 3.0 Flash Drive.

KnowBe4 Warning: CryptoLocker Ransomware Spread Through YouTube

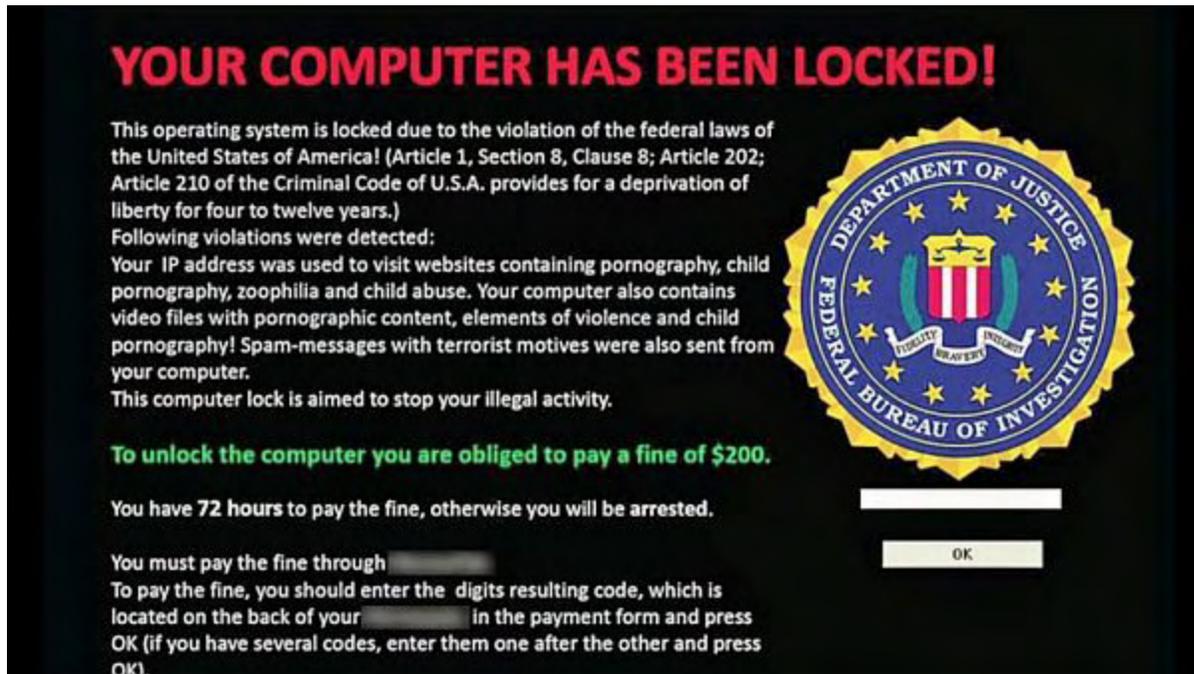
Kathy Wattman
kathyw@knowbe4.com

Ransomware has taken on a new spin—combining multiple types of malicious software with ransomware to create new variations of threats that make keeping up a much more difficult chore. Solving security threats like this has gone from handling a reluctant nuisance to solving a business killer. Below is an alert from KnowBe4 on the latest ransomware attempt—using YouTube to distribute it. As most people run across a YouTube video frequently, this is a valuable notice your audience may thank you for!

If I can be of any assistance or provide you with additional information or interviews, please do not hesitate to e-mail or call.

Malvertizing on YouTube is the latest threat vector being used to spread CryptoLocker and variant CryptoWall

Tampa Bay, FL (August 26, 2014) — VirusBulletin reported that cyber criminals are now spreading Cryptolocker / CryptoWall around via YouTube. Malware researchers Vadim Kotov and Rahul Kashyap discovered cyber-criminals were purchasing advertising space on YouTube and then using exploit kits to infect workstations .YouTube Ad space turns out to be a cheap and efficient way to spread browser malware while using their powerful geo-targeting features.



According to KnowBe4 CEO Stu Sjouwerman; "Clicking on a thumbnail after the first video causes a redirect, kicks in an exploit, which in turn looks for an unpatched hole and executes the ransomware. The user files are then locked with a \$500 ransom fee." Sjouwerman continued; "Unfortunately, this is a highly profitable criminal business model. Research shows there is very little advertising networks can do to prevent the attacks."

Spreading malware via ad-networks in itself is nothing new. These types of attacks are reminiscent of 2010's scareware with "Free Security Scans" that found a host of supposed problems and forced users to buy a bogus antivirus program to get their computer to run properly. Some of these gangs now have moved on to more lucrative ransomware.

Cybercriminals also have taken to combining malware to create a new ransomware menace, making it even harder for IT managers to safeguard their networks. Recent combinations include the despised Revetron "police" lock/screen which added to Pony and Papras password stealers, make a much more dangerous threat.

Sjouwerman (pronounced "shower'man") advocates the increased use of best practices to offset the increased threats. "It is important to patch end-user workstations as soon as possible. You might also consider either blocking YouTube at the edge, and/or deploying ad blockers in your Internet filter or as browser plug-ins, and of course, you guessed it, educate your users with effective training like Kevin Mitnick Security Awareness Training. After all, we are the only company that offers a ransomware guarantee to pay your crypto-ransom if you get hit with ransomware while you are a customer."

For more information visit www.KnowBe4.com

Links:

Virus Bulletin: www.virusbtn.com

Security Awareness Training: www.knowbe4.com

Ransomware Guarantee: info.knowbe4.com

About Stu Sjouwerman and KnowBe4:

Stu Sjouwerman (pronounced "shower-man") is the founder and CEO of KnowBe4, LLC, which provides Web-based Security Awareness Training (employee security education and behavior management) to small and medium-sized enterprises. A data security expert with more than 30 years in the IT industry, Sjouwerman was the co-founder of Inc. 500 company Sunbelt Software, an award-winning anti-malware software company that he and his partner sold to GFI Software in 2010. Realizing that the human element of security was being seriously neglected, Sjouwerman decided to help entrepreneurs tackle cybercrime tactics through advanced security awareness training. KnowBe4 services hundreds of customers in a variety of industries, including highly-regulated fields such as healthcare, finance and insurance and is experiencing explosive growth with a surge of 427% in 2013 alone. Sjouwerman is the author of four books, with his latest being *Cyberheist: The Biggest Financial Threat Facing American Businesses*.

About Kevin Mitnick:

Kevin Mitnick is an internationally recognized computer security expert with extensive experience in exposing the vulnerabilities of complex operating systems and telecommunications devices. He gained notoriety as a highly skilled hacker who penetrated some of the most resilient computer systems ever developed. Today, Mitnick is renowned as an information security consultant and speaker, and has authored three books, including *The New York Times* best seller *Ghost in the Wires*. His latest endeavor is a collaboration with KnowBe4, LLC.

iPhone 6 Most Wanted Features: Did Apple Grant Our Wishes?

Financesonline.com earlier ran an infographic [showing the features](#) customers most-hoped Apple would deliver in the new iPhones. They've since created an updated version adding information showing which most wanted features actually appeared in the new devices.



"Surprisingly," writes the site's Alex Hillsberg, "the much demanded sapphire screen and bigger battery were not included."

So was the new iPhone 6 and iPhone 6+ everything you expected it to be?

Kanguru FlashTrust USB 3.0 Flash Drive

Product category: USB 3.0 flash drive

Manufacturer: Kanguru

Model: FlashTrust

Web site: store.kanguru.com

Price: \$29.95 list (8GB)

Our current (and probably permanent) climate is one in which so-called "BadUSB" raises the potential for malicious attacks of all sorts.

Just a couple of months ago researchers unveiled "BadUSB," a threat that can potentially allow any USB device (wireless mouse or keyboard, webcam — or an untrusted flash drive) could theoretically be messed with in such a way that it could deliver malware to an individual computer or an entire network. To address the problem there are lots of solutions out there involving the hardware encryption of data.



The Kanguru FlashTrust line of USB flash drives is a little different in that it is designed for use by any company, organization, or individual that is concerned about security but may not require the level of cost and strict regimen normally associated with hardware encryption.

According to the company, "FlashTrust drives are designed in compliance with NIST requirements for implementation of a digitally signed device firmware. Any attempt at changing the customized, onboard device firmware with an unauthorized, malicious version is impossible. Furthermore, there are self-tests run at startup of the cryptographic module which handles the firmware security within the USB drive itself that ensure the integrity of the original firmware. If the self-test fails, the device will not operate."

As a result, Kanguru FlashTrust line of drives are unencrypted but come with digitally secured RSA-2048 bit trusted firmware onboard to protect against the malicious (BadUSB).

Also, thanks to "SuperSpeed" USB 3.0, the Kanguru FlashTrust drives are crazy-fast—read speeds of as much as 230MB/sec. and write speeds of up to 85MB/sec. (Of course, you need a computer or device with USB 3.0 built-in.) Don't worry, they're still backward compatible with USB 2.0.

The drives also offer very tough aluminum housings, a three-year warranty, and US-based assembly. They also include and a physical write protect switch—very important in situations where you have to interface with an untrusted machine that might potentially be able to embed malicious code that could infect your machine or network.

Kanguru FlashTrust drives are available in 8GB, 16GB, 32GB, 64GB and 128GB capacities. The drive we looked at—the 8GB model—lists for \$29.95.

Very nice, solid storage solution.



Review contributed by Kendra Cliegh

Multiple award-winning author Charles Carr has written more than two thousand newspaper articles, magazine stories, and columns for many publications including the San Diego Union Tribune, The Californian, The North County Times, Parent Magazine, ComputerScene, and ComputerEdge Magazine where he has been an editor for more than two decades. He is also a television producer/director with shows both currently airing and in production on Cox Cable and elsewhere.

In the 1990s, Charles wrote 3DHouse, a complete inside-and-out virtual reality tour of his family's log home in Southern California. One of the first virtual reality programs ever created, 3DHouse enjoyed tens of thousands of shareware downloads on all major portals. He also sold the rights to Radio Shack and Egghead Software. 3DHouse has since been featured in many books and articles about VR.

Carr has also been commissioned to write and/or directed many of his own stage plays. Several years ago, Carr and others looking for ways to help organizations struggling in difficult

economic times, founded Art Animates Life (www.artanimateslife.org).

To date, Art Animates Life, a CA incorporated, federal non-profit, has raised tens-of-thousands of dollars for San Diego area disaster relief, an arts non-profit and municipal gallery, a community outreach center, and several struggling community theaters.

Several years ago Carr was commissioned to adapt and direct the beloved Dickens classic, A Christmas Carol. The play, titled "Mr. Scrooge & Mr. Dickens," has sold out So Cal theaters for the past several years. Six shows will take place Dec. 2013 to benefit the San Marcos Historical Society.

Another original play, "All the Time in the World," has been performed many times and garnered broad acclaim from audiences and critics alike. Carr is working on a brand new adaptation of the classic Hitchcock thriller, "The Lady Vanished," to be performed spring 2014.

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

Carr is also a noted producer, director, and videographer. Several of his documentaries can currently be seen on So Cal's Cox Cable. Since its inception he has produced the Fallbrook International Film Festival's red carpet event and panel discussions.

Charles receives dozens of requests each year to appear on Southern California television and radio stations to talk about important tech events. He also speaks from time-to-time to high schools and organizations about his eclectic life in the arts.

Learn more at www.charlescarr.com.



Editor's Letters: Tips and Thoughts from Readers

“Computer and Internet tips, plus comments on the articles and columns.” by ComputerEdge Staff

"Dictionary Apps"

Dictionary Apps

[Regarding Jack Dunning's September 5 [article](#), "Free Software for Finding the Right Words":]

Great article on computer dictionary. Couple things.

1. Try Webster's 1828. Great dictionary with definitions from America's founders.
2. Think outside the box (OTB). Most HW and SW now come with Linux on the label. Does your computer dictionary run on Linux? At least acknowledge Linux in your article. If you aren't running Ubuntu (et al) on a computer, you're missing out on a large, growing segment of the computing population. Linux has come a long ways in the past decade. I teach computers and have been sending used computers home with my students to expose them to Linux. They love it.

-Mark Burton, Albuquerque

I Started to Install WordWeb, this statement was in the WordWeb Installation dialog box:

All users may use WordWeb for 30 days for evaluation purposes. After 30 days you may use it only if you take fewer than three flights in any 12-month period (i.e. at most one return flight per year). If you fly more than this you must purchase WordWeb Pro to continue using the software after 30 days.

What!?!?

-Mike, Denver

Mike, I must not have read the license agreement. It sounds like if you take more than one airline flight (round trip) a year, they want to guilt you into upgrading. I don't think that there is an automatic timeout—which makes it free.

I wonder if I get credit for working in a virtual office and not commuting. Is there any way

to get credits for recycling or building a huge garden uses lots of CO2 (my wife does that)?

Thanks,

-Jack Dunning , ComputerEdge

Hey Jack, I'm amazed to get an e-mail reply from you. I would think you have many other things to do that would not allow for such individualized replies. Wow!

I thought I was downloading a dictionary/thesaurus program so when something so completely unrelated (like airline flights) came up and demanded acceptance to continue, my phishing alerts went off and I declined and bailed out fast! I guess what you're saying is that the developers figure that everyone flies so that would be a "hook" to get people to pay for the Pro version. Otherwise, I can't see what one has to do with the other.

(Yesterday I was notified that I've just won the national lottery in Bora Bora or someplace like that. Sheeeesh, these guys never quit.)

-Mike K

If you can afford to fly more than three times in a year then you can afford to pay \$19.00, plus you get additional usability features. Here is the link to order the [Pro version](#).

-Buck-o, El Cajon, CA

Quite a few years ago I bought the New SOED combo two volume paper and CD editions at, as I recall, \$99 (\$199?). Have gotten a lot of mileage out of them, though the paper volumes were lost by the USPS. Sounds like I could have gotten pretty much the same now for \$19 through WordWeb, except for the ability to run it on my Windows 98 machine.

-Stewart A. Levin, Menlo Park, CA

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Table of Contents

List of ComputerEdge Sponsors	2
San Diego ComputerEdge Sponsors	2
Colorado ComputerEdge Sponsors	2
ComputerEdge™ Online — 09/26/14	3
The Internet of (Free) Stuff (IoFS)	3
Magazine Summary	3
Digital Dave	5
Port 445 Security Issue in Windows	5
Windows 8 Loss of Connection	7
Windows Update Knocked Out My Sound	7
The Internet of Stuff (IoS) and Free Cloud Services	10
Connecting Stuff Together	11
Wi-Fi Has Changed the World	12
My Computer Network	12
Internet Storage Systems	13
Making Use of Dropbox	13
My Box Cloud Storage	16
Google Drive as an Alternative ComputerEdge Archive	17
Why Not Have It All?	19
Verifying E-mail Addresses with AutoHotkey	22
RegEx E-mail Address Validator Number One	23
Wally Wang's Apple Farm	29
Upgrade Operating Systems with Care	30
Creating E-Books with iBooks Author	31
HealthKit and Apple Pay	33
The Confusion Over Apple Pay	34
The Moon Landing Hoax Debunked	35
Worldwide News & Product Reviews	40
KnowBe4 Warning: CryptoLocker Ransomware Spread Through YouTube	40
iPhone 6 Most Wanted Features: Did Apple Grant Our Wishes?	42
Kanguru FlashTrust USB 3.0 Flash Drive	44
Editor's Letters: Tips and Thoughts from Readers	47

Dictionary Apps

47