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Opportunity or Trap?

November 21, 2014

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Kickstarter, Opportunity or Trap?

The idea of boosting a product with crowdfunding sounds great, but there are serious pitfalls to consider. Plus, a few of the latest offerings.

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Digital Dave

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

Is a Secure VPN Service Needed for Public Wi-Fi?

Is a Secure VPN Service Needed for Public Wi-Fi?

Dear Digital Dave,

I was wondering if you are familiar with "[CyberGhost VPN (free)](#) and if so, fill me in on what you know of it.

First, let me note that CyberGhostVPN seems to be based in Romania (not that I have anything against Romania, but I've seen so much bad stuff coming from foreign countries lately, it worries me).

They advertise that one can install and activate their software on a Laptop PC (when needed) and maintain 100% Privacy (re: banking, credit cards, etc.) when traveling and logging into a Free Public Wi-Fi system via. CyberGhost's VPN servers. They go on to say that they retain no information sent through their servers (like account log-ins & passwords, account numbers, etc.).

Then, they say, one can bring their laptop back from traveling and re-connect it into the home LAN (with router) and use it as you once did, by just not activating the CyberGhost software.

My four questions:

1. Are you familiar with this?

2. Are they trustworthy (no malware, no retention of sensitive information, etc.)?

3. Will their VPN (with encryption) actually 100% protect me on a Public Wi-Fi system (how would I test whether I am 100% anonymous on Public Wi-Fi)?

4. Do you have any other comments or advice on using this?

As always, I'll appreciate your help and advice (before I do something stupid).

Sincerely,

AJ Dalton
Bonsall, CA

Dear AJ,

While I was not previously familiar with CyberGhost, I did find enough information on the Web to develop an opinion. But first it is worthwhile to review what a VPN does and why you might need one.

A Virtual Private Network (VPN) is a network setup which has two primary purposes. The first is to allow access to computers located at remote locations. The second is to add another layer of protection to your computer by placing it inside an encrypted network. This is similar to the function served by adding a router at home. The router creates an internal network theoretically only accessible by other computers on that same network. A VPN serves the same purpose except the network is independent of location and usually set up between one or more computers and the VPN server to the exclusion of the outside world not on the network. That means you can log into the VPN from anywhere and it is effectively the same, as far as access to the other computers and security, as being on a local network setup with a local router network.

The key to making VPNs safe is the encryption of all communications. When any data is sent over the VPN, whether e-mail, Web pages, or other Internet activity, it is scrambled—at least until it reaches the VPN server. Beyond that point (from the VPN to the target host) the security is more dependent upon security provided by the host. Once outside of the VPN, if this data is not encrypted, then anyone on the same network (with the right tools) would be able to intercept the data.

The problem with many public Wi-Fi locations is that every computer is on an open network. There is no protection within the hotspot preventing a hacker from casually intercepting unencrypted information which may allow access to some accounts. The purpose of a VPN is to encrypt everything which travels from the computer through the Wi-Fi hotspot to the VPN server thus thwarting the spy sitting next to you.

In 2010 there was a Firefox extension released called Firesheep which allowed anyone with a computer and Wi-Fi to watch and intercept open personal data—including access to Facebook accounts—with the wireless connection in the local Starbucks or any other open hotspot. When this news hit the media it caused a major uproar. Enough companies, such as Facebook, scrambled to deal with the security issue that since that time there is less need for VPN protection at public Wi-Fi hotspots—as long as you take a few precautions. The hotspots have not added more protection, but most of the things that you normally do on the Internet are

safer.

Most Web sites which require any type of logging in (including Facebook) now use the *HTTPS://* protocol for encrypting transmissions, both to and from the site. If you see these leader characters (*HTTPS://,* make sure the *S* is included) in the address line, then you are communicating over a secure line. (You will also see a lock icon.) This means your browser and the Web site are communicating using a security certificate which is encrypting the data you send to the Web server where it is then decrypted. The reverse process occurs in the other direction when the data is sent back to you. As long as you are using a secured site, all that anyone can intercept is gibberish. Gmail and other e-mail sites also use *HTTPS://* to protect data in their Webmail pages. If your public Wi-Fi browsing consists of mostly using these types of secure sites or open browsing of non-sensitive sites which require no security, such as reading *ComputorEdge*, then you are not facing much danger. But even then a VPN gives an addition level of security, especially if you have Web sites or other Internet activities which are not automatically encrypted.

Since Firesheep no longer works with Firefox, no doubt by design, I don't know of an easy way to check if all your traffic is encrypted. I'm sure there are tools out there, I'm just not familiar with them. If a particular VPN is not doing the job, then someone would quickly blow the whistle. I didn't see any indication of this problem with CyberGhost VPN.

The other step every computer owner should take is ensure that there is a password on their system. Some people neglect to assign a password to a machine because it boots up quicker. But that also means that someone on an open network might walk right in without even knocking.

CyberGhost VPN has good reviews, but I understand your concern about anything that originates in foreign regions—especially former Soviet Bloc countries. Actually, one of the reasons for CyberGhost VPN's existence is sparked by similar fears. Another benefit of a VPN is that it is very difficult to identify the location of the user. This is helpful if you're a dissident residing under the thumb of a hostile regime. All of your traffic will look like it is coming from the location of the VPN host server. Your IP address is hidden behind the IP of the server. This is how your home router hides the internal IP of your computer from the outside world. One of CyberGhost's specialties is protecting its users from being identified. Unlike many VPNs CyberGhost doesn't even keep any activity logs which could be subpoenaed by Romanian courts.

One downside of using a VPN hosted in Romania is that, depending on the VPN server location, the round trip could significantly slow down response times. On the other hand, one neat feature is that VPNs can be used to get around regional locks on content, or any kind of time lock (by coming in from another time zone). Sometimes you can also use it to get better prices on digital content (other markets may have lower prices). Although, I did note that some sites may be blocking CyberGhost IPs—ergo this comment: "I was trying to register at a forum but could not because every single Cyberghost IP address I attempted to use was on a block

list for Spam." This would be an action by the particular forum.

As for malware, I read many reviews and comments by users and found no hint that CyberGhost may try to load nefarious software on your computer. Most reviews were positive and noted that it was one of the few VPNs which offers a free service. (Apparently, the free service is limited to three-hour sessions, only connects to one computer and limits the number of servers available for connection.) There is another VPN called [TunnelBear](#) which limits the free version to 550 MB free per month, but if you're only using it in airports, that may be enough.

Another step that you can take to protect yourself is ensure that you are actually logging onto the right Wi-Fi system. There are some who will temporarily put up their own Wi-Fi hotspots with a name very similar to the real hotspot. Check the various options carefully and make sure you're connecting to the right one. (If you're not sure, ask the bartender for the right name.)

Whether you need a VPN or not is dependent upon how you use your computer. If you plan to remotely access a computer, then you will need some form of a VPN to make the connection. But if all you do on the Internet when using a public Wi-Fi is either read sports and news or, when handling private information, work with secure Web pages and e-mail sites, then you are pretty safe.

Digital Dave

Kickstarter Realities:What Buyer and Sellers Should Know

"Is Kickstarter the Best Way to Raise Money?" by Jack Dunning

Million of people visit Kickstarter to either hype their business idea or back an interesting product. Whether you're a buyer or seller, there are a few things you should know. Plus, notable and silly product ideas.

Two weeks ago "World News and Reviews" highlighted what appears to be the beginning of a decline for Kickstarter. It seems that entertainment companies are having a harder time raising money for game development through crowdfunding. They may have met the force of the law of diminishing returns.

The law of diminishing returns states that the more you do something, the less benefit you get from it. It's been applied to everything from economics to eating an apple pie. The first piece of pie tastes great. In fact it is so good that you must have another piece. By the time you get to the last piece, you've lost your enthusiasm and the pie is almost tasteless. This is an apt description for the evolution of most Internet services. They are almost certainly best in the beginning—until they either become overused or people just get bored.

In the case of Kickstarter it is overuse. What was initially an excellent way to raise money, it has become saturated with so many new (or rehashed) ideas that it's difficult for any one product to get enough attention or money. On top of that, there are numerous stories about funded projects which never delivered the promised goods. This causes potential sponsors to

shy away from new projects. The mantra continues to be "Buyer beware!" This may be for the best.

While a person may like getting in early on a new product, most people don't appreciate the risk involved in buying something which doesn't yet exist. Yes, Kickstarter requires the projects to guarantee delivery or return the funds to the sponsors, but that's just not the way new business works. In development there is no way to guarantee success. Often the best thing that can happen to a Kickstarter project is fail to get funded. This saves both the backers and the seller.

"Seller Beware!"

In spite of Zack Brown who posted a [Potato Salad project](), I have no doubt that most people who set up Kickstarter projects are in earnest and in good faith plan to deliver. However, most have no idea what reaching their goal in Kickstarter may cost them. From the perspective of many it looks like easy money, but it's not. The Brown had a problem when he raised $55,492 ($55,482 more than his $10 goal) to make potato salad. He was required to allow 464 backers "hang out in the kitchen with me while I make the potato salad, choose a potato-salad-appropriate ingredient to add to the potato salad, receive a bite of the potato salad, a photo of me making the potato salad, a 'thank you' posted to our Web site and I will say your name out loud while making the potato salad." I'm not sure how big his kitchen is, but it seemed like a bit of an obstacle until he decided to rent a larger venue. Fortunately, Brown was smart enough to [spend all of the money]() through delivering on promises, special events ([PotatoStock]()), and charity.

The problem with the funds from a successful Kickstarter campaign is that they are not investment, but taxable revenue. Backers do not invest in the company nor take any form of ownership, therefore there is no tax break for the project. All funds are considered sales and are subject to income tax. Plus, if the project work is done by its originator, then there are Social Security and Medicare taxes due. The only way to reduce the liability is through expenses directly attributable to the project (e.g. materials, manufacturing, shipping, events). The potato salad guy got around all tax issues by either spending it or giving it to charity. However, the tax consequence is not the worst problem for a successfully funded Kickstarter campaign.

The High Cost of Kickstarter Success

While there are projects which get funded, then mysteriously disappear, the most common problem is people honestly taking on more than they can chew. They just aren't ready for

success. They are looking for seed money for a good idea, but the amount they ask for is not nearly enough to fulfill their goals. When it's realized that there is not enough to deliver on promises, the founders often kick in their own resources digging the hole even deeper. Eventually, the entire project goes belly up, leaving the backers outrage and the project and its owners bankrupted. Some have been known to lose their home.

Getting more money than a Kickstarter project funding goal may be an even worse problem. As the amount of funding increases, so does the amount of work to fulfill the many more promises. Sometimes this may mean hiring more people or moving to the next level of manufacturing. The investment required may greatly surpass the increased project funding. Plus, in an effort to make backers happy, the project often will add new features to the product. This results in mission creep which can get very expensive and result in no delivery at all. While it may seem counter intuitive, the best result for a Kickstarter project may be a funding failure. There is some evidence that businesses are now looking at Kickstarter more for market feedback than money. A funding failure can provide valuable insight into a products market potential without needing to deal with a group of unreasonably demanding prepaid customers.

Cheap Market Research through Kickstarter

One of the most difficult determinations for any company is what will sell and what will flop in the marketplace. Kickstarter provides a platform for immediate evaluating market demand. The trick is to set the goal high enough that project won't get funded. (As pointed out, the project could be in trouble if it does meet its goal—and even worse trouble if it greatly surpasses the goal.) Since Kickstarter reaches millions of consumers, the reaction (or lack of it) is a decent measure of how much people would want your product. A positive reaction, while no guarantee of ultimate success, is the strongest indication that the idea is on the right track. There is no better test market than real people putting down real money.

A poor reception may be the best result of all. It may save a lot to time and effort producing something that nobody wants. Or, possibly a design change or market message adjustment is needed. This information can be much more valuable than a few sales in a successfully funded Kickstarter project. A Kickstarter failure may just be the best thing.

On the down side, any project posted on Kickstarter is an announcement of what you're doing to the world. If you have the next hot item, then secrecy goes out the window. All your competition will immediately know what you're up to. (Plus, I'm sure the patent trolls frequent the site. On the other hand, the early posting of ideas on Kickstarter—successful or not—may help defeat patent trolls.)

Interesting Kickstarter Projects

I combed through the current Kickstarter projects looking for clever ideas. The following are a few that I found interesting (some already reaching their goal, others not likely to):

Ear-O-Smart

I was never into wearing one or two earrings, but for those who do, the Ear-O-Smart may be the wearable technology for them. "Ear-O-Smart is the world's first fashionable, smart earring which helps in monitoring your heart rate, calories, and activity level." Why wear a bulky smartwatch or activity band? This tiny chip fits into a variety of fashionable earrings. It turns out that the earlobe is one of the best places to measure one's pulse. Plus, it can tell you when you're "ears are burning." It's just the thing for the techie on the go.

Powerlace Advanced Auto-lacing Shoe Technology

This is not a computer product but a clever way to secure your shoes to your feet while holding or using your smartphone. (It doesn't interact with your smartphone, but leaves your hands available for dialing and poking it while tightening the laces.) It's the hands-free Powerlace Advanced Auto-lacing Shoe Technology that does the job. "The new auto-lacing system paves the way for efficient hands-free shoelace tying made possible by Powerlace. Simply slide your foot into the shoe and adjust the lace's tension as you deem necessary. To reverse the process and loosen up the shoelaces, the activation of the

small lever at the lower back end of the shoe is all that is required." This project is looking for $650,000 (albeit Canadian dollars) and may be a good candidate for a thankful Kickstarter funding failure. For $25 Canadian dollars you get a t-shirt.

A 3D Lens for Your Digital Camera

Did you ever wish that you could take 3D pictures with your digital camera so that you could later view them with those cardboard glasses containing red and blue lenses? I didn't think so, but apparently we're in the minority.

Now there's a use for the 3D in that 3D TV you bought a few years back. The [Kúla Deeper for SLR's and Kúla Bebe for smartphones](#) has surpassed its goal and raised about $68,000US (in Danish Kroners) to provide lenses which capture two images from separate angles creating a 3D image in the same fashion as the old toy [View-Masters.](#) The software saves the images in most of the 3D formats so you can pick the one that matches your 3D glasses and/or View-Master.

"Choose any of a number of fun ways to view your photos instantly using the app that comes with Kúla Bebe. Our favorite for on the spot viewing is Kúla's CinemaBox. For sharing instantly online with your friends, our top choice is an animated gif called Wigglegram."

A cool GIF file simulating how a 3D photo might look with your special glasses and 3D TV

Track and Find Your Stuff

A tracking chip in a plastic case, [StoneTether - The Smallest Tracking Device at Long Range](#) claims to have a range of 500 feet using Bluetooth technology. Program it with your smartphone—"Use the proximity tracking feature of our iOS and Android Application to find anything with a StoneTether attached." Set it to activate an alarm on your phone when your kid or dog wanders outside a set limit. It's water resistant to 30 feet and, unlike many other tracking devices, has a replaceable battery. It also has an audible signal which can be activated when searching for a lost item. StoneTether has already surpassed its goal of $15,000 and reached $132,639 with 24 days to go. It sounds like a success. Hope the numbers work out.

The Opposite of a 3D Printer

Rather than building an object from a 3D desktop printer with plastic ink, the [Carvey: The 3D Carving Machine](#) removes the unwanted material. These types of machines have long been used in industry, but this is a desktop model for designers and hobbyist who do single projects and prototypes. "Carvey is a 3D carving machine that allows you to make quality objects out of a variety of materials including wood, metal and plastic." The Carvey comes with free design software. Create your own design and feed it into the machine.

This carving machine seems to have found its market with $634,760 pledged on a goal of $50,000. Over 200 people are putting up $1999 to get one of these desktop gadgets. (I'll wait for the price to come down or competition to enter this now proven market.) Sorry, but by the time you read this time has expired at Kickstarter. Delivery is not scheduled until September of next year so backers need to be patient.

Who Needs a Bike Rack?

Here's an electric bike that will make that short trek a little quicker. With about a 15 mile range, you can pull it out of your backpack, unfold it, and ride in comfort with the Impossible—a folding electric bike that fits into a backpack. It's a pretty clever concept based on the shape of wheels—circles. It uses rechargeable batteries to propel the bike at about 12 miles per hour. This kickstarter project has already surpassed its goal of $55,000 (Canadian dollars) by almost 300%. It's a novel product that probably has a very specific niche—possibly crowded cities with high rates of bicycle theft.

The Impossible looks like a pretty risky project. The actual or projected weight of the bike is not mentioned (10, 15, 10 lbs?). It could easily be more than most people want to carry to class in their backpack. The batteries alone weigh about a pound. Plus, if you weigh over 190 lbs (85 kgs), then you are probably too big for the bike.

A Taste of "Back to the Future"

I saw it in one of the "Back to the Future" movies—I can't remember which one. It must be the same technology used in the Star Wars hover craft. Now the Hendo Hoverboard is a reality. Using magnetic induction technology to set up repelling magnetic fields, the hoverboard works on special surfaces. It's a far cry from using it on the streets, but it could certainly be the start of another out-of-control extreme sport—this time frictionless.

The technology involved in this hoverboard is not easy to harness—many have tried. They have working prototypes, but the board requires a special riding surface. This is the type of project which could easy plow through the $466,550 pledged as of this writing (the goal was $250,000) and could end up costing the inventors many times that amount. "We've hit a technical snag!" A nice idea, but may be difficult to make practical.

Bulky Toy Smartwatches

High-tech education usually generates a lot of interest. The funding period for [DynePod: Bringing You The Internet of Toys](#) has just started. A first glance it looks like a sinister plot to make kids accustomed to wearing bulky smartwatches. However, there is a great deal of technology incorporated:

• Bluetooth LE
• iOS Tablet Control (iPhone 4S and iPad 3rd Gen and newer)
• Vibrating Motor
• Audible Buzzer
• Multi-Color 5x5 LED Pixel Display
• 3-Axis Accelerometer
• Li-Ion High Capacity Battery
• Over-the-Air Updateable Software

This one could be fun, but it looks like an Apple device (iPhone or iPad) is required as a controller. As usual, the software won't run on my version iPad.

Turn Off That Alarm Clock!

"I'm sorry I'm late, but my alarm clock didn't go off." The [Ramos: Wake Up, Get Up](#) is aimed at people who sleep really deeply. It's designed to force you to get out of bed and walk into the next room in order to turn it off. Give me a break! If you hadn't been up all night playing video games, you might actually be able to get up in the morning.

Do you need to be tricked into waking up? Maybe. I suppose that there could be some people with a deep sleep disorder who can't wake up, but I would rather to see an alarm which activates a motor attached to a chain shackled to the sleeper's leg which drags the recalcitrant out of bed—no snooze button. For my money one of those old windup alarm clocks with a clanging bell would be a better option. Place it on the other side of the room. You're forced to get up and walk across the room when the alarm goes off.

Tiny Chips

There are always a number of tiny computer chips available on Kickstarter. This time the Micro-sized Arduino Compatible Platform & Add-ons provides the best example. These are toys for nerds. The chips can be used to make clever products, but from reading the Kickstarter page it was difficult to determine what.
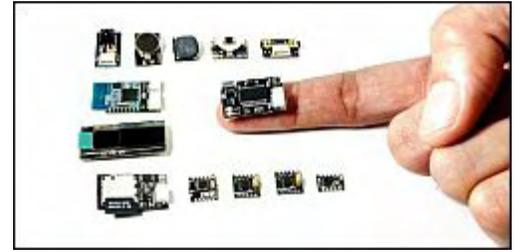
If this is the project for you, then you probably already know it.

The Risk for Kickstarter Backers

The greatest risk for a Kickstarter backer is that you pay your money and never receive anything. The next level down is you receive the product, but you're disappointed because it either doesn't work at all or doesn't work as expected. This is fine if you keep your expectations low, but sometimes it feels good just to be involved with the original innovation. However, it you're the type of person that believes everyone will deliver as promised, then it may be best for you to avoid Kickstarter completely. (Nobody wants to deal with a sore head.) Wait until the product comes out on the market (if ever) and buy it on Amazon.com—who is happy to give you your money back when it turns out to not be what you expected.

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:

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

ComputorEdge 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.

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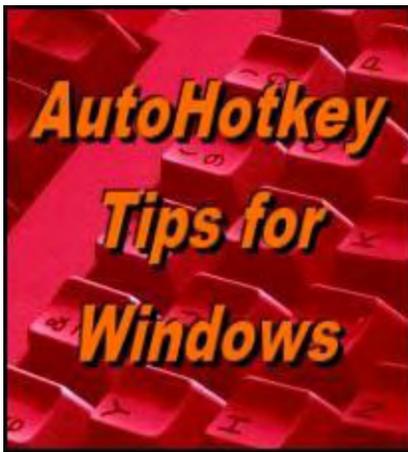
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and *That Does Not Compute!*, brilliantly drawn cartoons by Jim Whiting for really stupid gags by Jack about computers and the people who use them.

A Simple Beginner's Trick for Swapping Letters and Words

"AutoHotkey Can Make Many Editing Tasks Easier for Anyone" by Jack Dunning

Jack shows some easy AutoHotkey techniques for swapping errant letters or words, then step-by-step builds a Regular Expression (RegEx) for doing the same thing and more—with only one line of code.

This column starts out with some beginning tips for correcting minor typos by swapping letters or words while editing text in any Windows program or Web browser. Then, a simple Regular Expression is introduced to swap two words. Step-by-step that expression is modified to handle more and more complicated situations. Eventually, an expression which will swap the first and last words in almost any highlighted text is offered. If you are unfamiliar with Regular Expressions in AutoHotkey, then you might like to review this previous column, "[Easy Regular Expressions (RegEx) in AutoHotkey](#)", for a simplified introduction to AutoHotkey Regular Expressions. (New to AutoHotkey? See our [Introduction to AutoHotkey](#)!)

The Beginner's AutoHotkey Tip for Swapping Letters and Words

A while back I introduced a simple AutoHotkey script for fixing a common typo—[swapped letters](#). I added it to my basic running AutoHotkey script. Whenever I notice that I've reversed two letters (*tset*) I can highlight the two letters and press the ALT+R (*!r*) hotkey combination and the two characters swap position within the word. I do use the hotkeys from time to time even though it is relatively easy to either drag one letter to the correct position (in any program that support dragging) or delete one letter and re-enter it in the proper place. Sometimes it's just quicker.

However, I noticed that if I accidentally highlighted more than two characters or needed to move a letter more than one space, then the routine would delete the extra characters. There is

a relatively simple fix for this letter swap:

```
!R::
  SendInput, ^c
  Sleep, 100
  Clipboard := SubStr(Clipboard,2) . SubStr(Clipboard,1,1)
  SendInput, ^V
Return
```

This script is almost identical to the original code. The assigned hotkey combination is ALT+R as shown by the *!R* assignment in the first line of code. The selected characters are sent to the Windows Clipboard (*SendInput, ^c*). A pause is added to the running script to allow enough time for the characters to settle in the Clipboard (*Sleep, 100*). Then, the Clipboard text is parsed and reshuffled (*Clipboard := SubStr(Clipboard,2) . SubStr(Clipboard,1,1)*). This [SubStr() function](#) is where the current routine differs from the original.

In the old snippet I used:

for parsing and swapping the characters. The problem was that I limited the second part of the swap starting with the second character to only one character (*SubStr(Clipboard,2,1)*), thus eliminating any additional letters. By eliminating the second number in the function, the string is expanded to the entire remainder of the string, thus moving the first character to the end of the string. The new rearranged text is sent back to replace the highlighted characters (*SendInput, ^V*). Admittedly, this only moves the first character to the end of the selected string and another hotkey would be required to move a letter to the front of the line, but this seems to suffice for now. Generally, CTRL+Z can be used to *Undo* any mistakes.

But what if we want to swap two words in our text?

Swapping Two Words with AutoHotkey

When I reread my writing, it's not unusual for me to notice that I have reversed the order of two words. (I know that it doesn't seem possible, but it does happen—even though I know the words were properly situated in my head.) If I'm working on the Web, it's easy enough to highlight one of the words and drag it to the proper location. (It's not so easy in Notepad which does not allow dragging.) But wouldn't it be nice to highlight the two words and hit a hotkey combination to swap them. With a relatively simple adjustment to the first script the feature is added to a Windows computer:

```
!W::
  SendInput, ^c
  Sleep, 100
  Position := InStr(Clipboard, " ")
  Clipboard := SubStr(Clipboard,Position+1) . " " . SubStr(Clipboard,1,Position-1)
```

```
   SendInput, ^V
Return
```

This time the hotkey combination has been changed to ALT+W (*!W*) for swapping words. The script looks almost identical except the [InStr() function](#) has been added to locate the position of the space between the two words in the Clipboard (*Position := InStr(Clipboard, " ")*). This is needed to properly parse, then reverse the order of the two words with the *SubStr()* function.

The *Position* of the space is used in with the *SubStr()* function to clip the words and recombine them with a space between them (*SubStr(Clipboard,Position+1) . " " . SubStr(Clipboard,1,Position-1)*). This works well as long as there is one space between the two words and the same punctuation at the end of each word. Otherwise, we get into more complicated parsing while adding more lines of code. The same happens if we decide that we want to swap words with a conjunction between them (e.g. "and", "or").

Swapping "Bows and Buttons"

Everyone knows that the proper order for these words is "buttons and bows", not "bows and buttons." But if you happen to type them in the wrong order it's tedious to fix them, even if you can drag each word around with a mouse. At a minimum, you must drag one word to the other side, then drag the other back to the new location. Wouldn't it be easier if you could highlight the entire three word combination and hit a hotkey combination to do the entire job?

This word rearranging can be done with the usual AutoHotkey commands, but it gets a little more complicated:

```
!A::
  SendInput, ^c
  Sleep, 100
  StringGetPos, Position1, Clipboard, %A_Space%
  StringGetPos, Position2, Clipboard, %A_Space% , R
  Clipboard := SubStr(Clipboard,Position2+2) . SubStr(Clipboard,Position1+1,Position2-
                   . SubStr(Clipboard,1,Position1)    ; continued from previous :
SendInput, ^V
Return
```

Notice that I have switched from the *InStr()* function to the [StringGetPos command](#) for this AutoHotkey snippet. I did this mostly to show the alternative command for locating the position of a character within a string. The two work in an almost identical manner except the first position is 0 for *StringGetPos* whereas it is 1 for *InStr()* because 0 would be false (no match found) in the function.

There are now two lines of code for finding the location of the two spaces (*Position1* and *Position2*). The first line finds the first space while the second finds the first space from the right (see the *R* in *StringGetPos, Position2, Clipboard, %A_Space% , R*).

The *Clipboard :=* statement gets much longer (I had to fold it with AutoHotkey line continuation for the Web site) and a little more complicated to figure out. The first *SubStr()* returns the last word which starts at *Position2+2*. (Remember that the first position is 0 with the *StringGetPos* command, so then we must add 2 to the position of the space rather than one for the *SubStr()* function.) The center section of the text remains the same, but must be extracted with a more complex expression (*SubStr(Clipboard, Position1+1, Position2-Position1+1)*). The last word is a clipping of the beginning of the Clipboard text (*SubStr(Clipboard,1,Position1)*). This works pretty well. In fact it will swap two words anywhere in a document as long as they are the first and last word in highlighted selected text. But if there is a punctuation mark immediately following the end of the first word, it will also be moved in the swap. Aarrgghh!

As you can see, the more we do with the AutoHotkey commands and functions, the more complicated it becomes. What if we want to deal with the problem of swapping words with punctuation such as a comma or semicolon following the first word? We most likely won't want that character moving with the word. It's time to look at RegEx for using less code while producing more powerful swaps.

Swapping Words with RegEx in AutoHotkey

If you're only doing the simple character and word swaps shown in the beginning of this column, then it's probably better to avoid Regular Expressions (RegEx) and use the quicker AutoHotkey commands and functions. However, a RegEx can deal with more complex situations without making the snippets of code too complicated. But first let's look at how a RegEx can do a word swap with one less line of code:

```
!W::
  SendInput, ^c
  Sleep, 100
  Clipboard := RegExReplace(Clipboard,"(\w+)\s(\w+)","$2 $1")
  SendInput, ^V
Return
```

When using the RegExReplace() function, we no longer a need to locate the position of the space between the two words (as long as it exists). It is simply a matter of identifying the first word *(\w+)*, the space in between *\s*, and the last word *(\w+)*. This expression is similar to those used in previous columns. The expression *\w* means match any letter or digit—the same as the range *[a-zA-Z0-9]*. Adding the plus sign + tells RegEx to continue matching characters as long as it is of the same type (letter or digit). To match a space the expression is *\s*. The first word match continues until it reaches a non-letter, non-digit, or space. After the space *\s*, the same expression is used to match the second word *(\w+)*.

The parentheses around the two word expressions create backreferences for use in the replacement. When doing the replacement with *RegExReplace()*, the value in the first set of

parentheses is indicated by *$1* while the second is *$2*. With the backreferences reversed, *$2 $1* (with a space between the two) in the above function, the words are swapped and inserted into the application.

This is fine for the simple swapping of words, but what if we want to swap "bows and buttons" in a text string?

Swapping Words with a Conjunction

Suppose we want a RegEx which will swap two words separated by a conjunction—for example "bows and buttons" to "buttons and bows"—the proper order for these particular words? A single hotkey combination would certainly be a more useful technique than to the steps involved in doing it by hand. The expression must be changed to recognize the conjunction:

```
!W::
  SendInput, ^c
  Sleep, 100
  Clipboard := RegExReplace(Clipboard,"(\w+)\s(\w+)\s(\w+)","$3 $2 $1")
  SendInput, ^V
Return
```

A third backreference *\s(\w+)\s* with a space *\s* on either side has been inserted in place of the original *\s* to recognize the word in the middle. However, since backreferences are by default number in the order they appear from left to right, the new insertion is represented by *$2* in the replacement string and *$3* is now assigned to the last matched word. To reverse the first and last word the replacement expression is *$3 $2 $1* with a space between each.

But what if we wanted to swap words with both a conjunction and punctuation such as the "bows" and "buttons" in "ribbons, bows, and buttons" phrase? The comma after the word "bow" (*bow,*) would cause a problem and prevent the swap since it would prevent a match. What's needed is an optional punctuation match which only appears when needed.

Optional Punctuation in a RegEx

Since sometimes there is punctuation after the word just before the conjunction (usually a comma or semicolon), the expression needs to recognize and match these situations. The expression *\S* (with an uppercase *S*) matches any non-space character (which includes punctuation). Placing this just after the first word expression and adding the question mark *\S?* makes it an optional match following the first word:

```
!W::
  SendInput, ^c
  Sleep, 100
```

```
  Clipboard := RegExReplace(Clipboard,"(\w+)(\S?)\s(\w+)\s(\w+)","$4$2 $3 $1")
  SendInput, ^V
Return
```

Enclosing the new subexpression in parentheses turns it into another backreference. This time the renumbering of backreferences from beginning to end makes it *$2* for the new replacement string. When there is a comma or semicolon, it will appear in *$2*. Otherwise, it is blank. Therefore the replacement expression *$4$2 $3 $1* will leave the punctuation in place whenever there is a swap.

This works fine for swapping the last two words in a series, but what if we want to swap two words which are farther apart?

Swapping Any Two Words with RegEx

So far we have a RegEx which will reverse the position of any two words in a series separated by a conjunction—with or without punctuation. But now we want to also swap two words which are farther apart. For example, the "ribbons" and "buttons" in "ribbons, bows, and buttons." If we highlight the entire text and use the hotkey combination, the result continues to switch the "bows" and "buttons" because it is the first match found that fits the expression. The expression needs to change so that it will match any combination of words and characters between the first and last word:

```
!W::
  SendInput, ^c
  Sleep, 100
  Clipboard := RegExReplace(Clipboard,"(\w+)(\S?)\s(.*)\s(\w+)","$4$2 $3 $1")
  SendInput, ^V
Return
```

The center expression is changed from a word *(\w+)* to a wildcard *(.*)* which matches anything and everything between the first and last word—as long as it's in the same paragraph. The dot . means match any character and the astericks * tells RegEx to continue matching until reaching the end of the string. The last space and word *\s(\w+)* continues to match at the end of the selected text. Now "ribbons, bows, and buttons" becomes "buttons, bows, and ribbons" swapping the first and last words—regardless of how many words, digits, or characters appear between the two.

The Problem of Swapping Contractions

This last RegEx works pretty well except when one of the words is a contraction. The hyphen *'* cuts off the match making the swap only include the letters following that hyphen. The RegEx needs adjustment to allow for contractions. This is done by adding a range to the first and last word expressions which include the hyphen *([\w']+\w)*:

```
!W::
  SendInput, ^c
  Sleep, 100
  Clipboard := RegExReplace(Clipboard,"([\w']+\w)(\S?)\s(.*)\s([\w']+\w)","$4$2 $3 $1'
  SendInput, ^V
Return
```

A range is enclosed with square brackets *[]* with RegEx matching any character within the range. In this case *[\w']* it is either any letter or digit *\w,* or the hyphen *'* punctuation mark. The plus sign *+* is added outside the square brackets to continue the matching as long as one of the characters within the range is encountered. This means that it is possible for the word to have multiple hyphens—which is unlikely to cause a problem.

The last *\w* is added after the plus sign to ensure that the word ends with a letter or digit—not a hyphen. This will prevent confusion with a trailing single quote.

This RegEx seems to work in most situations but it will not work when all you want to do is swap two words with only a space in between—our original beginner's problem and our original, simple RegEx. It would be a shame to use a separate hotkey combination to do such an easy word swap.

Adding Alternatives to RegEx Matches

The last RegEx is excellent for swapping the two words at the beginning and end of selected text—including contractions—but it won't work for two words with only a space between them. To prevent the need for another hotkey combination an alternative match is added to the expression:

```
!W::
  SendInput, ^c
  Sleep, 100
  Clipboard := RegExReplace(Clipboard,"([\w']+\w)(\S?)(\s.*\s|\s+)([\w']+\w)","$4$2$3
  SendInput, ^V
Return
```

As it turns out, the fix is relatively simple. Alternative matches can be added to a subexpression by placing the pipe | (vertical line) between the options *(\s.*\s|\s+)*. In this case, the RegEx can match either *\s.*\s* (anything surrounded by two spaces) or *\s+* (one or more spaces in a row), but not both. This quickly adds the option to switch two words only separated by spaces eliminating the need for a second *RegExReplace()* function line.

Notice that I needed to move the two spaces surrounding the wildcard *.** inside the backreference *\s.*\s*. This was necessary to prevent the expression from looking for multiple spaces when the space-only match was made. In addition, the plus sign was added to the single space option just in case there is more than one space between the two words. To compensate for the movement of the space expressions, the blank spaces are removed from

the replacement expression *$4$2$3$1* in *RegExReplace()*.

Multiple Punctuation in the RegEx Swap

I'm not sure how often this might occur, but it is possible that the first word is followed by as many as three punctuation marks—as in the case of the example *...buttons.'"* which includes a period, single quote mark and double quote mark. This can be dealt with by adding additional optional *\S?* expressions like so:

```
RegExReplace(Clipboard,"([\w']+\w) (\S?\S?\S?)(\s.*\s|\s+)([\w']+\w)","$4$2$3$1")
```

This will allow up to three optional punctuation marks without affecting the word swap.

On the other end it is possible that the last word will start with one or two quote marks (a double quote and a single quote *'"*). In this case it is probably best to use the quotes as optional characters in a new backreference:

```
RegExReplace(Clipboard,"([\w']+\w) (\S?\S?\S?)(\s.*\s|\s+)(""?'?)([\w']+\w)","$5$2$3$4$
```

That way any quotes encountered will remain in place during the swap. The replacement backreferences must be adjusted to account for the new subexpression *$5$2$3$4$1*.

Notice that there are two doublequotes in the expression *(""?'?)*. Normally a RegEx would only need one doublequote, but since it is used in an AutoHotkey function delimited with doublequote mark, it needs to be escaped to act as a plain doublequote. In AutoHotkey this is done by placing another doublequote mark in front of it as shown. Without that addition doublequote, a cryptic error will be generated when the script attempts to load.

This final RegEx for swapping words may not be perfect, but it should work in the vast majority of situations. Just added the following code to your standard AutoHotkey script:

```
!W::
  SendInput, ^c
  Sleep, 100
  Clipboard := RegExReplace(Clipboard,"([\w']+\w)(\S?\S?\S?)(\s.*\s|\s+)(""?'?)([\w']-
  SendInput, ^V
Return
```

Highlight the text from the beginning of the first swap word to the end of the last swap word and hit ALT+W. The two words should reverse positions. While this RegEx may look complicated, it is far simpler than what would have been required when using the usual AutoHotkey commands discussed in the beginning of this column. That would have required many lines of code and numerous mental gymnastics, With RegEx it's all done with one line of code.

<div align="center">*   *   *</div>

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.

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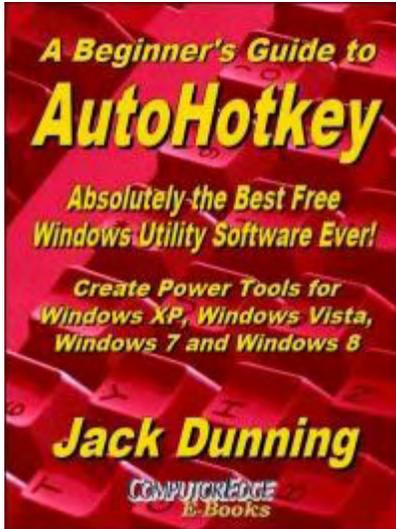
The second edition with more chapters and an index to the AutoHotkey commands found in the book is available in e-book format from Amazon (and other formats—EPUB and PDF— at the ComputorEdgeBooks Web site linked below). Jack's *A Beginner's Guide to AutoHotkey, Absolutely the Best Free Windows Utility 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 *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.

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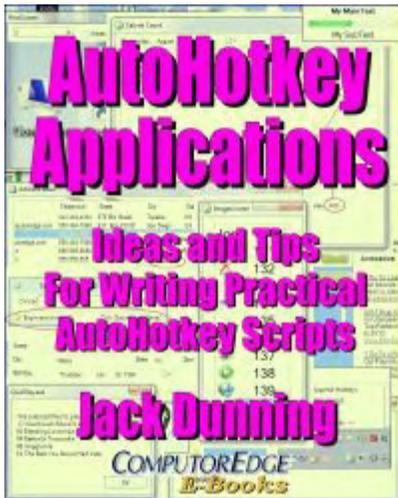
Jack's second AutoHotkey book, *Digging Deeper Into AutoHotkey* (preferred, EPUB format for iPad, Android, and computers; MOBI for Amazon Kindle; and PDF for printing) is comprised of updated, reorganized and indexed columns from *ComputorEdge* is now available. Since the columns were not all written 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.)
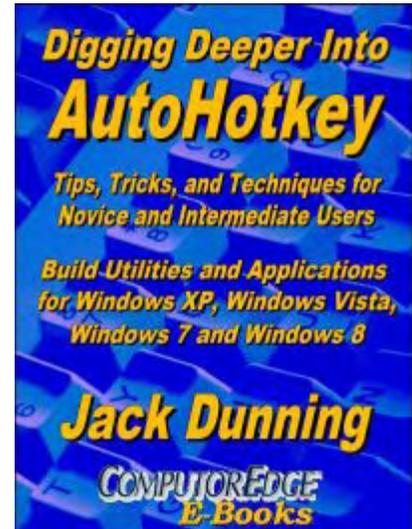
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Jack's third AutoHotkey book *AutoHotkey Applications* (preferred, EPUB format for iPad, Android, and computers; MOBI for Amazon Kindle; and PDF for printing) is an intermediate level book of ideas and applications based primarily on the AutoHotkey 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.)

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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:

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

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Wally Wang's Apple Farm

"Reasons to Go With Linux" by Wally Wang

Reasons to Go With Linux; An iPad for Life; The Decreasing Importance of Windows; Why Apple Pay Works; Convenience, Not Price Equals Success; Minimize Windows into Application Icon.

Many people evaluate the different computing platforms out there and choose the one best for them whether it's Windows, OS X, Linux, Android, or ChromeOS. Unfortunately many other people simply stick to what they know and criticize everything that they don't know in an attempt to convince others to avoid looking at alternatives.

One major criticism against buying a Macintosh has always been that it locks you into a single vendor. Of course, critics who bring up this point have no trouble locking themselves into Windows and the proprietary file formats of Microsoft Office. If you really want to avoid reliance on a single vendor, you don't want either Microsoft or Apple. Instead, you should visit DistroWatch and pick the Linux or BSD distribution that most appeals to you.

If you're a scientist, you can choose Scientific Linux, which targets the High Energy and High Intensity Physics community. At one time, most of the major workstations ran Solaris, so if you want to stay with Solaris, you can use Oracle Solaris 11 for free. Solaris is not only a proven operating system but one with far fewer hackers dedicated to breaking its security.

For people who really worry about the security of their operating system, one of the most secure operating systems has always been OpenBSD that has released the fewest flaws in its default configuration than any other operating system.

If you just want the most popular Linux distribution around, you can't go wrong with Linux Mint or Ubuntu. For the longest time, SUSE Linux was popular so you can use OpenSUSE for free. If you want to use the operating system that Apple based OS X on, use FreeBSD.

Many Windows enthusiasts embrace Windows PCs because they enjoy the choice of different computer manufacturers and parts that they can install in their own PCs. Yet while they embrace the freedom to choose their own hardware, they strangely lock themselves into the proprietary world of Microsoft Windows while claiming to dislike the walled-garden approach

of Apple products. For those people who truly want freedom, there's no better choice than an open source operating system that lets you change the source code if you wish. That's true freedom that you can never get from Windows or OS X.

If you really want to stay away from the walled garden approach of Apple, you should also stay away from the walled garden approach of Microsoft Office proprietary file formats and use LibreOffice instead. Then you should stay away from Windows 8 that mimics Apple's App Store with a Windows 8 app store of its own.

If you want speed and reliability, you want Linux, which is why the Department of Energy plans to build the world's fastest supercomputers using Linux. Speed and reliability is the reason why the London Stock Exchange switched to Linux after spending millions trying to get their Windows-based system to work. After spending millions on their original Windows-based solution, the London Stock Exchange dumped it all for Linux so they have nothing to show for their millions spent trying to get Windows to work for them.

Between the open source world of Linux and the proprietary world of Windows and the Macintosh, you can decide which choice is better for you. Whatever choice you make, just make sure it actually makes sense. Claiming you use Windows because it offers more choices than a Macintosh makes no sense when Linux offers even greater freedom than Windows can ever give you.

When it comes to choosing an operating system, you have plenty of real choices that now include ChromeOS and even Android on a PC. Combined with virtualization software that lets you run Windows on Linux or OS X, you can get the best of both worlds by truly studying your options. The goal is to get the best technology for your needs regardless of who makes it. The goal is not to choose one option out of familiarity and inertia and then try to rationalize why it's better than everything else when your arguments really steer you towards another solution like Linux instead.

An iPad for Life

After T-Mobile started gaining new subscribers with their lower rates and more attractive plans that includes 200MB of free data for your iPad over T-Mobile's cellular network, Sprint has finally realized they need to compete as well. To entice customers, Sprint now offers an iPad for Life program that lets you lease an iPad Air 2 or iPad mini 3 for $20/$17 a month.

iPad for Life Plan 24-Month Lease		iPad for Life Plan 24-Month Lease	
Device	Monthly Payments	Device	Monthly Payments
iPad Air 2 (16GB)	$20.00	iPad Mini 3 (16GB)	$17.00
iPad Air 2 (64GB)	$24.00	iPad Mini 3 (64GB)	$21.00
iPad Air 2 (128GB)	$28.00	iPad Mini 3 (128GB)	$25.00

(Monthly payments exclude taxes, surcharges and service plan charges)

Figure 1. Sprint lets you lease an iPad for a low monthly fee.

At the end of your two-year lease period, you'll have the option of buying the iPad, trading it in for a newer iPad, continue leasing at the current price, or terminating your contract altogether. Naturally you'll still have to pay for a data plan for your iPad, but Sprint's new iPad for Life program provides an inexpensive way for anyone to get an iPad if they need one that offers cellular connectivity.

For an even cheaper solution, just buy a refurbished older model iPad and haunt Wi-Fi hotspots around town. It may not be as convenient, but it's definitely more cost effective. Or get a refurbished iPad that includes cellular connectivity and use T-Mobile's network to get free 200MB of data a month.

With a little creativity, you can find a way to get what you want at the right price. Without any creativity at all, you can complain about everything without using logic. Sadly, you can guess what too many people prefer to do.

The Decreasing Importance of Windows

For decades, Microsoft did everything they could to protect their Windows market. As Windows struggles in the mobile computing market and slows in the ordinary PC market, Microsoft recently decided to release Microsoft Office for iOS and make it free. Curiously, Microsoft has a touch-centric version of Microsoft Office for iOS and plans to release a version of Microsoft Office for Android, yet they still haven't created a touch-centric version of Microsoft Office for Windows 8, Windows Phone, or Windows RT.

Even more surprising is that Microsoft has decided to open source a large portion of their .NET programming framework so it can run on Linux and OS X. Theoretically you'll be able to write programs for .NET and run them on Windows, Linux, and OS X.

Why is Microsoft suddenly releasing products for rival operating systems? Maybe because they finally realize they're a software company and software companies need to sell software on platforms people are using. More people use iOS and Android on mobile devices than Windows, so Microsoft could either keep hoping the world would suddenly adopt Windows

for all their mobile devices or they could accept reality and realize that selling software on other platforms still makes them money.

If Microsoft can accept the reality that Windows is no longer the only operating system in the world, then it's time for Windows enthusiasts to accept this reality too. Windows will still be around if you want it, but with real freedom of choice between operating systems, you'll no longer be forced to use Windows or nothing at all. Now you can choose between Windows, OS X, Linux, ChromeOS, and Android. Tomorrow you may have even more choices.

For people who truly embrace freedom of choice, the number of operating systems they can use should be something to celebrate and not something to criticize using arguments devoid of facts and reason.

Why Apple Pay Works

For years, companies such as Google tried to create a digital wallet so you could pay for items with a smartphone like people routinely do in Japan. Yet none of those solutions took off until Apple Pay arrived.

Whole Foods has processed more than 150,000 [Apple Pay transactions](#) while McDonald's says Apple Pay accounted for half of all its tap-to-pay digital transactions. Walgreens says its mobile wallet payments has doubled since Apple Pay came out. With companies like Meijer, Wegmans, Staples, BI-LO, and Winn-Dixie accepting Apple Pay, it's likely that Apple Pay will become commonplace and define the standard for tap-to-pay payment systems.

What made Apple Pay popular isn't just using NFC (near Field Communication) technology that's been around for years. Apple Pay is growing in popularity for several reasons. First, Apple Pay is more secure. With its fingerprint authentication process combined with location tracking to verify that you were the person authorizing payment at that particular location on a specific time, Apple Pay reduces the risk (and cost) of credit card fraud. Since merchants never see your credit card number, there's no risk that hackers can break into a merchant's computers and steal all of the stored credit card numbers.

Second, Apple timed the introduction of Apple Pay to coincide with the major banks demanding that merchants upgrade their point of sale terminals to accept more secure forms of credit card transactions. Merchants who fail to upgrade their point of sale terminals will now be liable for fraudulent charges. In the past, the banks took all the risk. If merchants are going to upgrade their point of sale terminals, they might as well make sure it accepts Apple Pay and other NFC-based payment standards like Google Wallet.

This combination of a carrot (fingerprint authentication, location verification, and masked credit card numbers) and a stick (merchants will now be liable for fraudulent charges) has created an environment that makes Apple Pay so attractive.

The secret has little to do with finally adopting NFC but in combining NFC with fingerprint scanners timed to match merchants forced to upgrade to more secure point of sale terminals. Remember, Alexander Bain invented the fax machine in 1843, but fax machines never became popular until the telephone system made long-distance calling inexpensive and telephone lines widely available to everyone.

No technology exists in a vacuum. That's why companies that cram features into their devices without regard for how someone could use those features are wasting their time. Technical specifications only make sense when they can solve real problems. Until then, even the most advanced technical specifications will remain useless for years or even decades. Just ask Alexander Bain how many fax machines he sold back in 1843 despite having some of the most advanced technology in the world for over a century.

Convenience, Not Price Equals Success

Remember when people made fun of the iPad and claimed it was nothing but a big iPod touch? Then they claimed that netbooks were superior because they offered a physical keyboard and the ability to run Windows programs (slowly and painfully on an underpowered processor)?

The list of dead iPad rivals includes the Hewlett-Packard Slate PC, the Hewlett-Packard TouchPad that only sold when priced at $99, the Motorola Xoom, the Blackberry Playbook, and the Dell Streak. PC World even chided all of these tablet rivals with their fixation on technical specifications by stating "It might be comical—if it weren't so sad—to see tablet vendors fixate on specs. Faster processors, more processor cores, more memory, more megapixels in the camera, SD memory card slots, and other differences in hardware don't make up for a poor interface, or an inferior user experience."

This fixation on technical specifications continues with smartphone, tablet, and computer manufacturers who still don't understand that cramming a device with advanced technical specifications means nothing if the product is still too hard to use. Give someone the world's fastest supercomputer with the Windows 8 tile interface and see how efficient they can be when they can't even figure out how to use the computer.

The main reason why so many iPad rivals failed is because they copied the basic design of the iPad but failed to make it compelling to use. Remember when Android tablet manufacturers tried to tout the superiority of Android tablets because they could run Adobe Flash? That lasted right up until the moment Adobe abandoned development of Flash for mobile devices like Android tablets.

Remember when people claimed mobile devices were useless without Flash? Most likely those people who made this claim won't acknowledge saying this either.

The most compelling advantage of most Android tablets is the much lower price over an iPad. With Microsoft giving Windows 8 away for free to any manufacturer willing to make a small Windows mobile device, Microsoft hopes to get more people using Windows devices for mobile computing. Of course, it's easy to undercut rivals with price. It's hard to make a profit by selling in volume. Even Wal-Mart doesn't compete solely on price but also with convenience since their large stores offer practically everything you could want in one place.

Price alone can't be your only advantage because it's unsustainable in the long run. Just as Wal-Mart and Amazon discovered, you can have low prices but you still need another advantage to survive and that involves customer convenience in ways that rivals can't match. Try starting a store or online retail site that undercuts Wal-Mart and Amazon on price. You may make sales, but you won't put Wal-Mart or Amazon out of business because you can't deliver convenience as well. The cost of duplicating Wal-Mart's stores or Amazon's presence on the Internet is a barrier that keeps rivals away.

Likewise, all of these failed iPad rivals offered similar or better technical specifications, but failed to deliver convenience. It's easy to find apps, music, and e-books for an iPad. It's easy to get help for a broken or flaky iPad by visiting an Apple Store. It's easy to avoid malware with an iPad. How easy is this to do with an iPad rival? The answer explains why so many iPad challengers failed.

Ultimately, every product needs to solve a problem by giving users the ability to do something they couldn't do without that product. Until rivals figure out this simple formula, they'll continue chasing after the technical specification fantasy that more must always better. Then they'll continue to scratch their head when they can't figure out why they can't compete against the iPad (and the iPhone and the Macintosh).

<p align="center">*   *   *</p>

Double-click on the title bar of any window and OS X shrinks that window into an icon that appears on the Dock next to the Trash icon. However, if you shrink lots of windows, the Dock can start getting crowded.

To solve this problem, you can minimize windows by having them disappear into the program icon on the Dock instead. To do this, click the Apple menu and choose System Preferences. When the System Preferences window appears, click the Dock icon. Now select the "Minimize windows into application icon" check box.
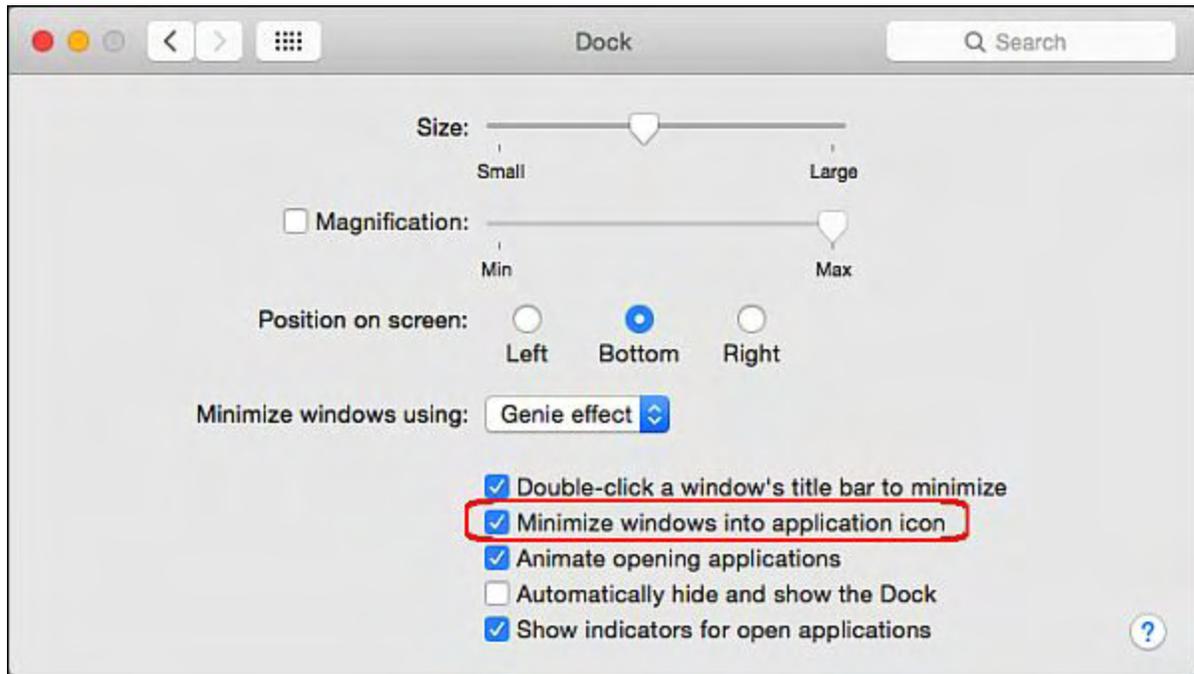
Figure 2. You can make minimized windows hide inside a program icon instead of appearing on the Dock.

With this feature turned on, double-clicking on a window title bar makes the window disappear inside the program icon. To open the window again, just right-click on the program icon and when a menu appears, click on the window you want to reopen.

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

Don't say we didn't warn you.

What is that store's return policy?

We've seen better; we've seen worse.

You'll probably be happy you did.

What are you waiting for?

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

Sickweather (Part I - "A Waze for Sickness"); Sickweather (Part II - The Scammening); Survey: Telecoms Could Lose Up to Half Their Customers in the Next Year; Over 70% of Office Workers Don't Know Who to Report a Security Breach To; Amazon Fire Phone.

Sickweather (Part I - "A Waze for Sickness")

Sickweather launched their first Android app this month following the success of their iOS app, which was released last November. Both apps now alert users in real-time when they enter Sick Zones: areas where illnesses are reported on social media. According the company's CEO, Graham Dodge:
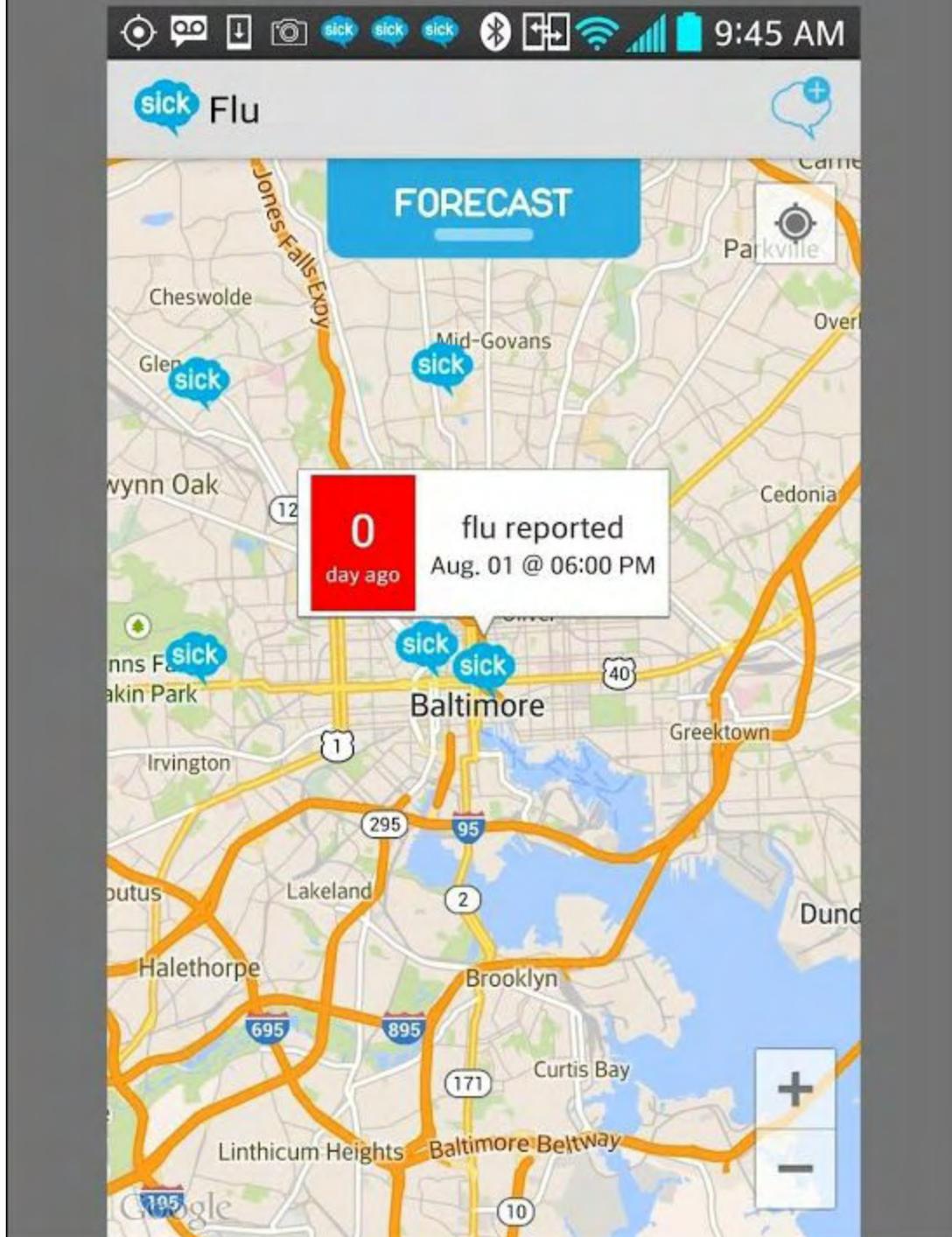
This remains the only app of its kind to combine disease surveillance from social media with geofencing and local notification technologies, to serve real-time Sick Zone alerts. The app also has an element of crowdsourcing, allowing users to report illnesses directly and anonymously to the Sickweather map.
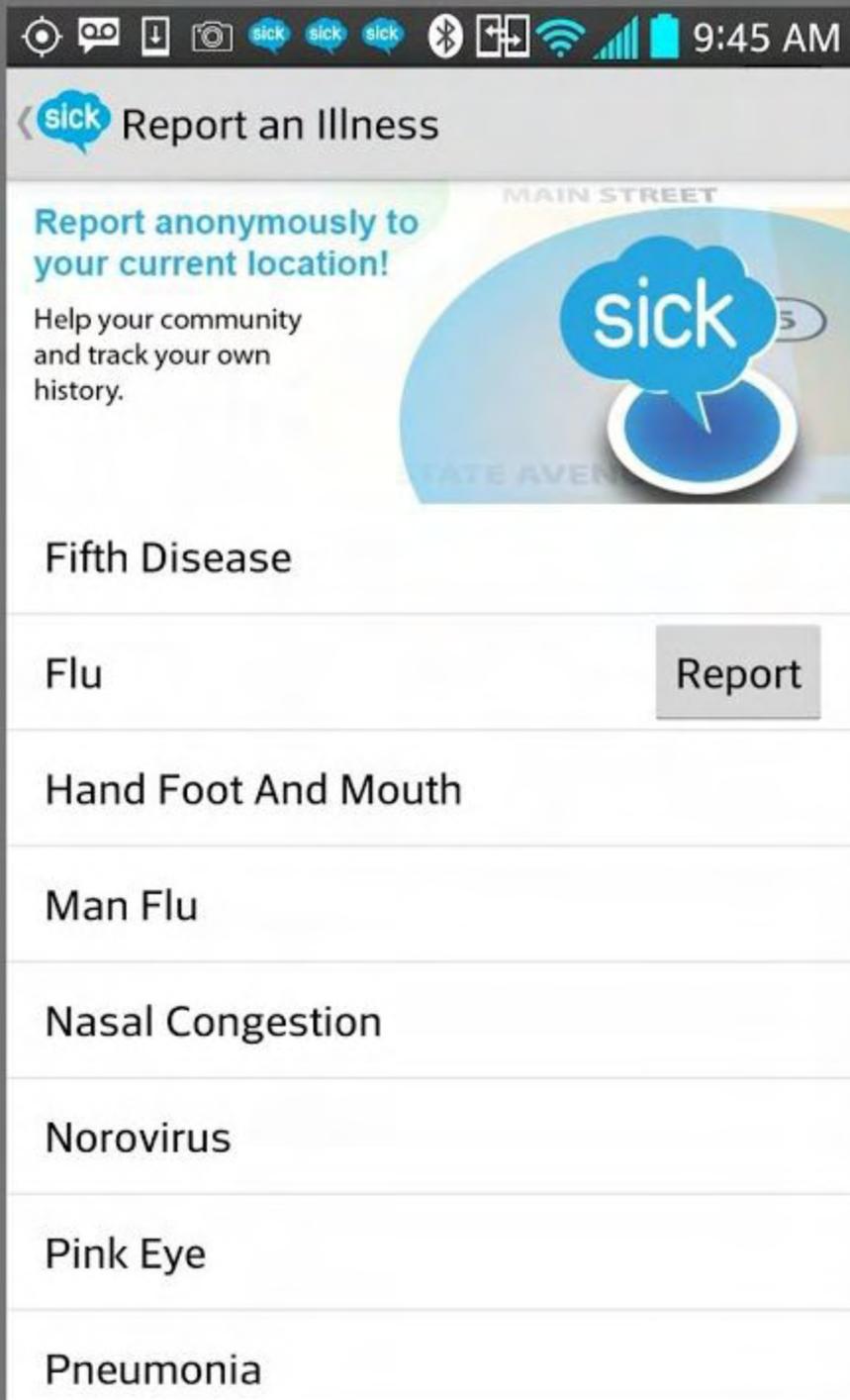
When someone publicly posts "My kids have strep" on Facebook or Twitter, Sickweather qualifies that report using a patent-pending process and then plots it on a map. When a Sickweather user travels near that report (whether they are dropping kids off at school or traveling for business) they will get a real-time alert on their iPhone warning them of their proximity to strep throat, effectively making Sickweather the Doppler radar for sickness.

Sickweather is like the Waze for sickness. When someone checks-in their symptoms with us, not only is their report anonymously mapped for their community to be alerted, but it is also logged to their own "My Reports Map" which can be used to track when and where they've been sick, or have come in contact with others who are sick.

The new Sickweather Android app is available in Google Play as a free download here.

Version 2.3 of the iOS app is available in the App Store as a free download here

Sickweather (Part II - The Scammening)

Not long after we received info about the above Sickweather app, we got this:

A company called Tube Emoji has somehow made it through the App Store review process using several other companies' likenesses, including Sickweather's name and trademark logo, along with an exact copy of Sickweather's app description to promote a fake app called "Sickweather Pro." As of this writing, the App Store listing for the counterfeit Sickweather Pro (found here) lists Moviefone.com as the company Web site and support site and is a paid download for $2.99.

"It's disturbing how this app made it past App Store review process" says Graham Dodge, CEO of Sickweather. "At times we've had to jump through hoops to get updates for our app published to the App Store, so to see this flagrant violation of trademarks and erroneous provenance get published is more than a little frustrating."

Survey: Telecoms Could Lose Up to Half Their Customers in the Next Year

Telecoms operators can be sure to keep only about half of their existing customer base over the next 12 months, according to a recently published major global survey titled 2014 Telecoms Customer Insights by the global technology research and advisory firm Ovum. About a quarter of all users globally say they will definitely change providers, with another quarter indicating they may do so. According to Ovum:

"The research provides one of the largest and most unique global data sets that illuminates the significant differences in users' churn patterns in incredible detail," said Angel Dobardziev, practice leader at Ovum. For example, the survey finds that almost twice as many customers of Airtel India or LG U+ in Korea plan to churn more than the global average of 23%. In contrast customers of Vodafone Germany or NTT DoCoMo in Japan are much more loyal, with only about 1 in 10 indicating they plan to switch operators.

The survey shows that the quality of the mobile broadband experience is the leading driver for mobile operator churn, with 37% of consumers globally saying that they either have left or plan to move to another provider because of slow connection speeds. For operators, these findings highlight the importance of investing in broadband.

The survey, which included over 15,000 consumers and 2,700 enterprises in 15 major global markets, also underlines the global importance of being online.

"Being online is by far the most important thing in consumers' digital media lives," continued Dobardziev. "When we asked consumers to rate a range of activities on a scale from 'essential' to 'unimportant', browsing the Web came top, with nearly 6 out of 10 consumers rating it as essential. By comparison, an old favorite such as watching TV was rated by only 3 out of 10 consumers as essential, scoring as less important than reading the news (50% of consumers), reading a book (45%) and listening to music (42%)."

The survey also found that iPhone users are much more likely to churn than those with another phone, and mostly in order to find a provider with faster mobile network speeds— again underlining how crucial the quality of broadband experience is to consumers.

Operators must deepen their understanding of consumers' propensity to switch providers, not just in their own market, but more broadly given that global trends permeate national borders. "This must be combined with an evaluation of drivers for customer churn across different segments, markets and providers, with a view to gaining insight on the best, and worst, practices—despite differences in local market contexts and levels of competition," said Dobardziev.

Over 70% of Office Workers Don't Know Who to Report a Security Breach To

We heard from the folks at Wildfire PR this week:

Fewer than a third of office workers in the UK and the US would know who to contact within their company if they suspected their computer or another device had been subject to a security breach, such as a compromised login or phishing attack.

This finding is part of a study conducted by security software provider IS Decisions, for the launch of the latest version of UserLock, its user access management software for Windows-based networks. The research also found that the majority (52%) of people do not realize that sharing their work-related logins can represent a significant security risk to their employer.

This behavior and lack of awareness shows a shocking deficiency in effective training. Considering IS Decisions research has also found that only 21% of IT professionals put insider threats in their top three security priorities makes this even more alarming.

Fran�ois Amigorena, CEO of IS Decisions, commented, "The fact that the overwhelming majority of office workers have no idea how to report a security breach is a very worrying statistic. It needs to be addressed, but more training or stricter policies alone are not going to

solve this problem."

Amazon Fire Phone

Product category: Smartphone
Manufacturer: Amazon
Model: Fire Phone (32 GB)
Web site: www.amazon.com
Price: $0 with two-year contract, $449 with no annual contract, other monthly plans available

If you take the shape of the iPhone 5s, switch it with another case and put different buttons on top you might confuse it for an Amazon Fire Phone. Still, there are some important differences.

The newest and (so far) only Amazon phone is called the Amazon Fire Phone. The shape reminds you of an iPhone but, to be honest, the Fire Phone looks a bit different (and, of course, on the back there's a quite noticeable Amazon logo).

The 4.7 inch display looks fantastic and makes it easy to read all of the information on your phone. The phone feels comfortable to hold even if the case is made of plastic. Another feature you might recognize is the dots on the front of the phone which look like small cameras. These aren't cameras, but actually little sensors that are responsible for the dynamic prospective, which allows you to rotate the phone in different directions.

The Quad-Core processor works well and fast; it's up to date and can easily handle watching movies and playing games. Unfortunately, the display is not HD resolution, which is important to keep in mind because many competitor phones already come with HD displays. The battery life is also rather short and runs down when 4G is being used really quickly. After one day of using the phone, you will definitely have to plug in the phone again.

An interesting and unique feature that the Fire Phone has to offer is how you can access different apps, menus, shortcuts or other information by simply tilting, swiveling, or peeking at the phone. By tilting the phone, you can open the menus on the left side navigation and on the right information's can be attached to messages. The swivel option will open the taskbar and show you easy information like incoming messages or allow quick access to a few things like the flash light or settings. And the peeking feature gives you additional information and details. It's pretty easy to learn the navigation options and use them, however it didn't function every time and had very inconsistent responses. Still, I think this has a lot of promise and may perhaps be the future of smart phone technology, however it's definitely not there yet.

If you use the Fire Phone's most basic feature of making phone calls, you'll be surprised how great the person on the other side sounds. It's crisp and crystal clear, making you more eager to be a better listener!

The scarce availability of apps is apparent in the Amazon app store. Of course the most popular apps are available (Facebook, Gmail, What's App, Angry Birds, etc.), but there aren't nearly the same amount of options as compared to Apple iTunes or Android Play Store. The other problem is that because the Amazon App Store is not as well supported as Apple or Android, many of the apps don't work as well. For example, sometimes you are just looking for a way to get one step back, but it doesn't work properly and creates a very frustrating situation. You will also search for other apps which you are already used to from Android or IPhone devices and find there is no equivalent app available.

My experiences with the Amazon Fire Phone were patchy. The hardware specs look very good and the features which Amazon included in the Fire Phone are different compared to other smartphones, making the phone innovative. However as aforementioned, the software isn't quite advanced enough to beat other smartphones, but I have hopes that Amazon will make some improvements in the future that will make it more saleable.

If you are interested in Amazon's products or own a Kindle Tablet already, then you'll be satisfied with the smartphone because you are already used to the Amazon App Store. Also, if you want to use all of the offered Amazon services like Cloud, Instant Video, Amazon Music, Amazon eBook shop and the Amazon shop you will be happy about the phone and love to use the offered services on the phone.

⊕⊕ ⊄

Review contributed by Tobias Waldenmeier

Specs (from Amazon):

5.5" x 2.6" x 0.35" (139.2mm x 66.5mm x 8.9mm)

5.64 ounces (160 grams)

2.2GHz Quad-core Snapdragon 800 CPU, with Adreno 330 GPU and 2GB of RAM

4.7" HD LCD display, with 1280 x 720 resolution at 315 ppi, 590 cd/m2 brightness (typical), 1000:1 contrast ratio (typical)

13 MP rear-facing camera, multi-frame HDR, auto focus, optical image stabilization, f/2.0 5-element wide aperture lens, LED flash

2.1 MP front-facing camera

Fire OS 3.5

32 GB or 64 GB (actual formatted capacity will be less)

Free cloud storage for all Amazon content, and photos taken with Fire phone

Battery size: 2400mAh. Talk time: up to 22 hours; standby time: up to 285 hours.

Video playback: up to 11 hours; audio playback: up to 65 hours. Battery life will vary based on signal strength, network configuration, device settings, usage and other factors. Actual results may vary.

1080p HD video recording at 30 fps (front- and rear-facing cameras)

Dual stereo speakers with Dolby Digital Plus audio processing

Supports screen mirroring and Second Screen

Dynamic Perspective sensor system with invisible infrared illumination, gyroscope, accelerometer, magnetometer, barometer, proximity sensor, ambient light sensor

GPS, Assisted GPS, GLONASS, Wi-Fi/Cellular location, and Digital compass

UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz), Quad-band GSM/EDGE (850, 900, 1800, 1900 MHz), 9 bands of 4G-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 17, 20), supports carrier aggregation

802.11a/b/g/n/ac Wi-Fi, up to 300 Mbps with channel bonding; Bluetooth 3.0 wireless technology; NFC enabled

Premium, tangle-free headphones with remote and mic

Pre-installed Nano SIM card

Micro USB 2.0 port

3.5mm headphone jack

Included in the box Amazon Fire Phone with Fire OS 3.5
Premium headphones with remote and mic
Micro USB to USB charging cable
USB power adapter (5W)
Quick Start Guide

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 ComputorEdge 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 ComputorEdge Staff

"Smartphone as MP3 Player," "For Too Many Chrome Processes Use Malwarebytes," "Digital Music Scene"

Smartphone as MP3 Player

[Regarding Jack Dunning's October 31 article, "Smartphone Mania":]

Jack Dunning's article on smartphones was helpful, but missed the mark on its use as a dedicated MP3 player. To use it, you have to compile playlists, which is labor intensive. I compile MP3 CDs, which are seven hours long, by music genre or decade, compiled from a dedicated database. These will play in my auto CD player. I started this way before there were iPods and it serves me well for road trips.

-James Taylor, San Diego, CA

For Too Many Chrome Processes Use Malwarebytes

[Regarding the October 24 Digital Dave column:]

For Ron - San Diego, CA: I had a similar issue recently, may not be exactly the same, but sounds similar. I do not have Chrome on my Win7-Pro PC. There was a noticeable decrease in CPU performance. When the Task Manager was referenced, there were several "Chrome" processes running, coming and going, chewing up considerable CPU time.

I used Malwarebytes to run a scan and it located several "Trojans" and miscellaneous other malware. *[See Dave's response and comments about Malwarebytes.]* The "Trojans" it found had the same names as the processes that were running, usually named random letters. After cleaning, the CPU performance was restored and the "chrome" processes were gone. I regularly run CCleaner, Spybot, and MS Security Essentials. I do not run Malware Bytes regularly, but in this case, it was the only one that located and corrected the issues. Good Luck...

-Bill Gorsuch, Broomfield, CO

Digital Music Scene

[Regarding the October 31 [Without Digital Music, Life Would Be an Error column](#):]

Why do we constantly hear music from previous decades on ads and TV? Can anyone hum a melody from a song in the last 15 years? No editorial function, i.e. record companies, is present, so we're bombarded by amateurs who want to be stars. There is good music out there, but try and find it.

-James Taylor, San Diego, CA

A Message From the Year 2029

"Clap along if you feel like a curmudgeon without a cause
(I feel so crappy)"

Now that the Grandkids have jobs and are making purchasing decisions, the commercials play $%!# like Pharrell. Gee, it's so strange how that happens. Most good music doesn't end up in commercials at all anymore, it must be said…most musicians in my day and age have taken a stand, talking about integrity, ethical compromise, and some $%!# like that. But not to worry, Jim. Our music sells certain niche geriatric products nonetheless! Oh, what's become of my "Night Moves." Sick stuff, but cha-ching!

-Bob Seger, Novo Fordlândia

ComputorEdge always wants to hear from you, our readers. If you have specific comments about one of our articles, please click the "Tell us what you think about this article!" link at the top or bottom of the specific article/column at [ComputorEdge.com](#). Your comments will be attached to the column and may appear at a later time in the "Editor's Letters" section.If you want to submit a short "ComputorQuick Review", or yell at us, please e-mail us at [ceeditor@computoredge.com](#). If you would like to review our recent e-books, please visit [ComputorEdge E-Books](#).

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