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***Super High Speed
Internet Is Coming***

... Eventually

February 28, 2014

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Super High Speed Internet Is Coming . . . Eventually

Google Fiber is slowly installing one gigabit Internet in select communities. Is it the future or merely a waste of time and money?

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Digital Dave

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

Flash Won't Update!; Microsoft Word Failing.

Flash Won't Update!

Dear Digital Dave,

Once again I'm turning to you, Dave! Using Windows XP, SP3, with Avast (free). I have Flash in the mode where we click on the icon in a picture to activate it. It's a Chrome extension called Flash Control. When Avast opens a little window and tells me that Flash needs to be updated (Adobe Air? also), I try to do so and get a message that Flash "failed to initialize" (even though it downloads). Any idea why this happens?

Your loyal fan!

Sandy

San Diego, CA

Dear Sandy,

There may be no problem at all. It could just be an issue with Avast. It seems the there are often erroneous messages with regard to Flash as described by this [September 27, 2013 letter](#). If Flash still works the way it's supposed to work then I would ignore the Avast warning, but there are common problems with Flash after updating.

Often the act of updating Flash will disable it in the browser. Follow the steps in the linked letter to ensure that Flash is enabled in Chrome.

If that's not the problem, you may need to uninstall Flash in Add or Remove Programs and reinstall it.

Digital Dave

Microsoft Word Failing

Dear Digital Dave,

I'm in my mid-eighties and have been using Microsoft Word since the 2003 version. It keeps on failing for me now. I don't know anything about the most recent updates. So, could you please tell me which is the most viable version to update to and how to go about doing it?

Thank you,

(AKA Grandma Julie, 83+ and counting)

Julianna

Alpine, CA

Dear Julianna,

If you've been using Microsoft Word for decades and it just recently started giving you a problem, then I don't think that merely updating will resolve it—although it could. Since I'm not a Microsoft Word user, there is no way that I can tell you which update would be best, but there may be other readers who are willing to throw in their two cents. However, there are a few things that you can try.

It could be that some of the files for Word have become corrupted. Try reinstalling the current version of Word through Windows Programs and Features (Add or Remove Programs in Windows XP). You may find a Reinstall or Repair option in this program center.

If you recently added other software, then you can try rolling your system back to an earlier Restore Point. If the new installation introduced a conflict, a previous Restore point for any time before you saw the problem could fix the conflict—although you may no longer have the recently installed software available. (There is a description of how Restore Points work in Chapter Thirty-eight of Jack Dunning's book [Hidden Windows Tools](#).)

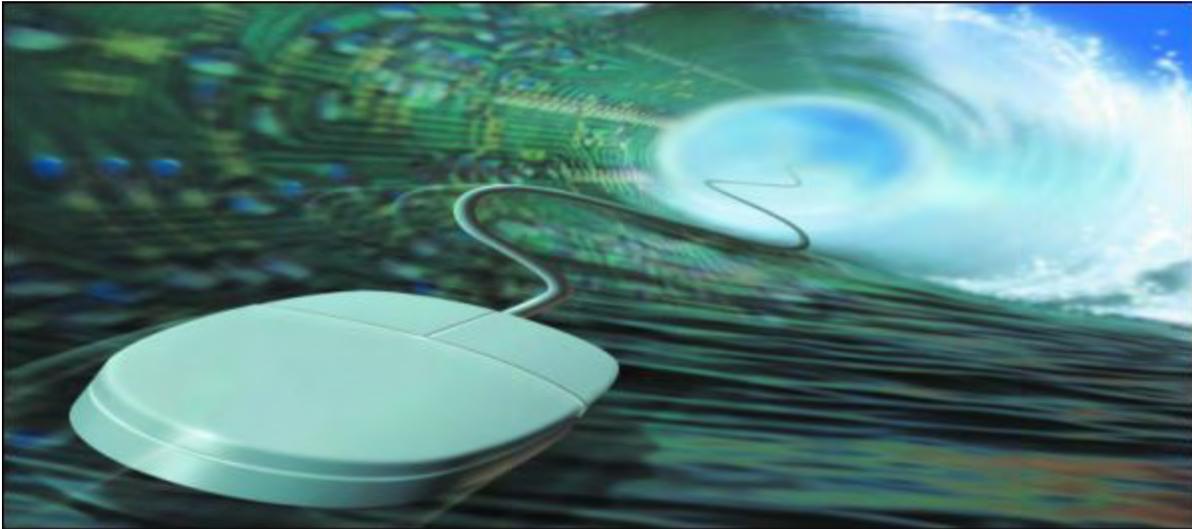
The next possibility is that the errors are coming from a faulty hard drive (or other computer component which is starting to fail). If this is the case, then any reinstallation, updating, or restoring will probably result in only a temporary solution. However, if it's a problem with your computer hardware, then it's likely that you'll see other issues occurring with other programs.

With this type of situation you need to keep trying different things until you can determine the cause of the problem. Unfortunately there is no one right answer that I can give you.

As an alternative, there are a number of free word processors available. They are normally a part of a larger suite of programs such as [OpenOffice](#) and [LibreOffice](#). (These two packages are almost identical.) They both work in a manner similar to the older version of Microsoft Word. For a comparison Rob Spahitz has a couple of e-books available at

ComputerEdgeBooks.com.

Digital Dave



Blazing Fast Internet with Google Fiber

“Are the Cable Companies on Route to Becoming Obsolete?” by Jack Dunning

Comcast, Cox and other cable companies sit back and watch while Google Fiber installs gigabit Internet connections to homes. Progress is slow, but will it be Google's biggest coup?

Eventually, the dinosaurs die out. This is a story that's repeated over and over in the business world. When companies become dominant in their industry, they go on defense, stomping out new young competitors, soliciting the government to build bureaucratic roadblocks to market entry, and offering their customers a consistent diet of mediocrity. It's only when truly innovative newcomers or someone with huge financial clout comes along that these stodgy old line enterprises start to crack.

In this case, the current dinosaur is the cable industry. While positioned to derive enormous benefits from the future of technology, their business plan is a relic of the past. Even those who saw the future of fiber optic cable and started taking action, such as [Verizon FIOS](#) and [AT&T U-verse](#), have now either decided to give up any expansion or that "going in and digging up yards and deploying fiber in a lot of new markets isn't in the cards." They are building a defensive wall through local monopolies and government interference to prevent the future from arriving.

If you've noticed that your Netflix occasionally loses a little resolution or needs to rebuffer more often, it may be because your Internet provider is throttling it. This is one reason why Netflix just struck a deal with Comcast to deliver their service without interference. Never mind that you paid for a certain bandwidth of Internet service. If you're watching the wrong thing (and the cable company isn't getting an extra toll), then you may experience some problems. This was supposed to be protected by the concept of [net neutrality](#) (providers cannot discriminate against specific Internet services), but the FCC rules on [net neutrality were](#)

[recently thrown out](#) by the D.C. Circuit Court of Appeals.

Both Netflix and the cable companies complain that the high volume of streaming video is clogging the lines. It seems that the obvious solution would be to upgrade the system for higher bandwidth. The current average 10 megabit connection, which a couple of decades ago was hailed as the future of the Internet, now looks like a wholly inadequate system, nowhere near capable of providing for the future. What will be needed in the next decade is the one gigabit connection, but the cable companies seem to have little interest in doing the work of laying fiber optic cable. It's easier to work out deals with Netflix and other Internet streaming services to squeeze more cash out of the current geographically monopolistic system. Ten years from now when [4K Ultra HDTV](#) and Internet program streaming are the standard, the current network of copper cable will be the stone age of Internet and cable service, but don't expect today's list of providers to bring you the new technology. Historically, the advances in innovation and technology almost never come from those companies we assume will be in the mix. Enter [Google Fiber](#).

The Vision of Google Fiber



Google Fiber is an ambitious plan by Google to bring one gigabit Internet connections to communities. Since Google is an Internet company, it has decided that it's in its own best interest to start introduce super high speed Internet to the world. After having set up test markets in Kansas City, Provo and Austin, Google has just announced that they are [expanding their target communities](#) by 34 in nine metropolitan areas (see Figure 1). While the additional locations don't currently represent a significant percentage of the potential market, cable/Internet providers should be worried. Gigabit connections are the obvious next step for an Internet which will place greater demands on bandwidth. If the cable companies don't do it, then someone else will—perhaps Google. Ten years from now there will be a demand for the higher speed Internet and any provider that doesn't offer it may find that their fortunes rapidly dwindling.

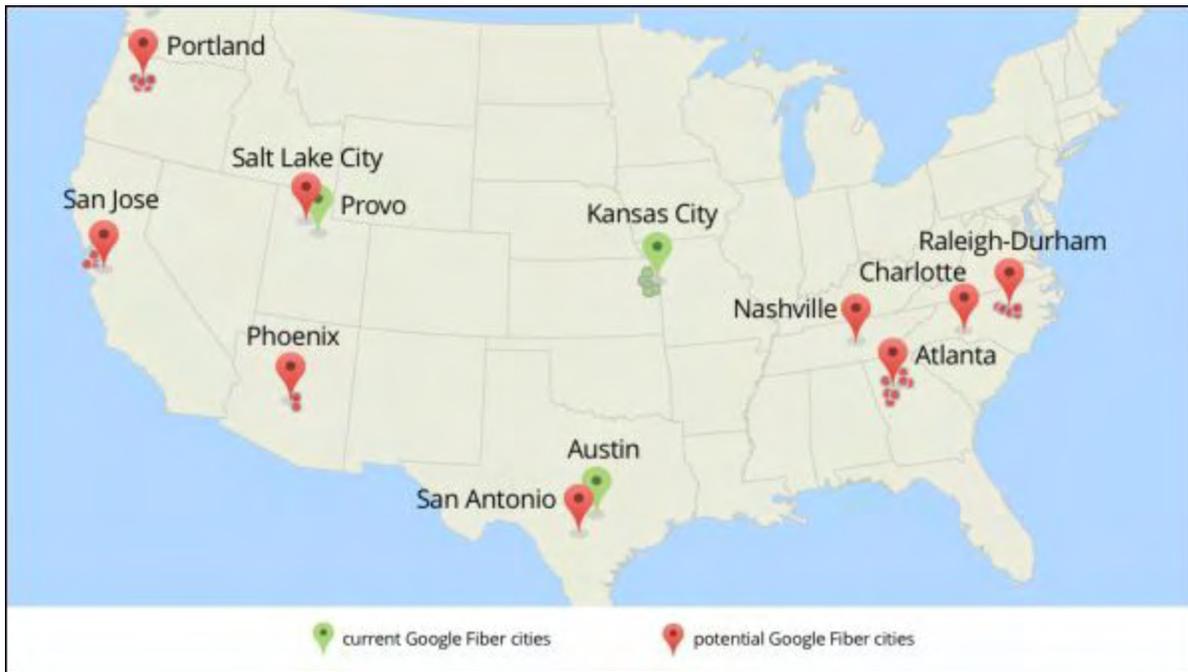


Figure 1. There are currently three metropolitan areas with ongoing Google Fiber projects. Nine more are now targeted.

Google is one of the few companies with enough financial and popular clout to get the attention of local politicians. If mayors can bring Google Fiber to their community, they are hailed as visionary leaders not beholden to the commercial relics of the past. These politicians know that the super bandwidth will attract the entrepreneurs who will build the next generation of technology in their community. But in return for Google's efforts, the city offices must help cut through the inevitable red tape. (For that reason alone, New York City may never see Google Fiber.) Getting right-of-ways, permissions, and other planning documents can be more formidable than the actual running of fiber optic cables.

Who Needs a Gigabit Connection?

Many are asking the question "Who needs that much bandwidth?" Today the answer is not very many people. Setting aside the sharper television images, better video streaming quality, faster downloading and Web browsing, the current ten megabit speeds seem good enough for most people. Even if you have the super fast Google Fiber connection, most of the Internet can't deliver at anywhere near that speed. There is not much incentive for the cable companies to build out fiber optic networks unless people are willing to pay more. Comcast has a 300 megabit package at \$300 per month with a limited number of takers. At current slow speeds the money just keeps rolling in, so why would the cable companies waste money on a future nobody is demanding.

This is obviously a shortsighted view. The demand for gigabit connections may not be high today, but when 4K televisions become the standard and the bandwidth hogging 4K content is

more prevalent, people will be looking for the greater Internet speed. That may not be for ten or twenty years, but by that time it could be too late for the current list of cable providers to catch up. Google Fiber's go slow approach which targets the low hanging fruit of cable installations could make Google the major cable and Internet company in the country. Google Fiber plays the coy date with local governments forcing each to prove that it's worthy of attention.

The beauty of Google's plan is that it is offering the one gigabit service at rates comparable to current cable company plans. If you had the choice between 10 megabit and 1000 megabit Internet speed for approximately the same price, which would you choose? It's a no brainer—even if you don't need it!

Cost of Google Fiber

There's even more for the cable companies to worry about as Google creeps into their area. The Google Fiber pricing is super competitive with other providers. If all you want is basic Internet at low cable speeds, it's free after a one-time installation fee (\$300) (see Figure 2).

Gigabit + TV	Gigabit Internet	Free Internet
The full package including internet and TV	100 times faster internet only	Free internet at today's basic speeds
\$120/mo + taxes & fees \$300 construction fee	\$70/mo + taxes & fees \$300 construction fee	\$0/mo + taxes & fees \$300 construction fee (one time or \$25/mo for 12 mo)
Gigabit	Gigabit	Basic
Up to 1 gigabit (1,000 Mbps) upload & download speed	Up to 1 gigabit (1,000 Mbps) upload & download speed	Up to 5 Mbps download & 1 Mbps upload speed

Figure 2. The three-tiered pricing of Google Fiber is competitive with local cable companies.

You do pay a little more for the gigabit service (\$70 per month) than you would for 10 megabit cable, but you're getting one gigabit! Plus, you have available one terabyte of Google Drive Cloud storage. The quicker browsing, sharper screens, and faster downloads with no data caps or throttling is well worth the few extra dollars. Google Fiber users in the current markets rave about the speed of their connection. It makes anything else look like a dog.

Add television channels and the price rises to \$120 per month which is comparable with (or

less than) any other provider for both cable TV and Internet (at a much slower speed). This package includes a two terabyte DVR (8 simultaneous recordings possible), one terabyte Google Drive Cloud storage, a Nexus 7 tablet, remote, and network box. Whether those rates will hold up depends on the overall success of the project and other possible competition. As Google Fiber spreads to many more localities, the cable companies will feel the pressure.

Another problem for the cable companies is that Google Fiber is getting high marks for its customer service. This is another area where today's providers are seriously lacking. Whether the good service is a function of the excitement about the new venture or if it will become an integral part of the way Google Fiber does business remains to be seen. But it is certainly a step in the right direction, if only for a little while.

How Long Will it Take to Get Gigabit Service?

While it has recently stepped up its efforts, it looks like it will be decades before Google Fiber can have an impact on most of the nation. The impediments to installing infrastructure (both physical and political) make progress slow. It's been estimated that by 2022 Google Fiber may have a base of seven million homes. Of course the speed of installation depends upon overall customer demand and how much Google is willing to invest. If it sees enough early success, it's conceivable that Google will further ramp up its investment in laying fiber optic cable. It certainly has the resources. In any case, the current announcement of stepped up activities should be getting serious attention from the cable companies.

While Google does want to see [gigabit Internet everywhere](#), it doesn't necessarily want to do it all on its own. The Google Fiber project is designed get attention and make both the cable companies and local nay-saying politicians nervous. These two groups, who are often in each other's pockets, have the most to lose if Google Fiber is successful. They represent the major opposition to giving their customers and constituencies what they want—more Internet speed. The cable companies pay financial homage to the local governments and in turn ordinances are passed which inhibit the entry of competition for the cable companies. However, Google's go-slow approach to selecting new areas uses a bidding process aimed at clearing away bureaucratic obstacles. When a city gets named as a target it's a talking point for the politicians. This picking the winners strategy no doubt makes the process much easier for Google. If a community starts to balk at Google's requirements, Google simply drops the project in that area.

As reported by the [Kansas City Star](#), Overland Park, a Kansas City suburb, delayed an approval vote over some concerns about an indemnification clause that Google required. Later, the council was set to approve the agreement as is. "Too late. Google was moving on." This action by Google is the model for those politicians who want to tinker around the edges. (This is not unlike the bookie who sets an example for others by breaking the legs of a deadbeat.) Google doesn't waste much time playing politics. There are plenty of other communities that want to prepare for the future.

Some speculate that Google would be just as happy if the cable companies started laying cable for the super high speed service. One of the reasons for the aggressive Google Fiber rollouts could be to terrify the complacent cable industry into taking action toward their own ultra high speed Internet service. Eventually the service will be needed—even if it's a decade from now. However, it takes a long time to build out a community. It's estimated that the Kansas City project will have taken over four years before its completion. Even if your city gets selected for Google Fiber, it could be another four or five years before you would see service.

In Provo, Utah, Google Fiber acquired the municipal fiber optic network [iProvo](#) for one dollar, plus the guarantee of free service for certain facilities and residents. Back in the 1990s, Provo was one of the few cities with the foresight to network with fiber optic cable. But over the years they encountered the typical problems and inefficiencies that come with the government running services. The deal looks good for both Provo and Google. This is an ideal setup for Google Fiber since installing the entire infrastructure is much more expensive than upgrading a current fiber optic network for one gigabit capabilities. For this same reason, Google may take a close look at acquiring other fiber optics systems such as Verizon FIOS. With the time it takes to network a community with fiber, acquisition of current systems may be the only way for Google Fiber enter some cities in less than a decade or so.

The Future of Gigabit Internet Service

Whether it is gigabit fiber optic cable or some other type of super fast service, there is no doubt in my mind that ultra high speed Internet service is coming. The only questions are how long it's going to take and who's going to do it. If you live in an area with no fiber optic cables in the ground, then unless either Google Fiber blesses your community with an installation or your local cable company gets off its proverbial rear end, then you're in for a long wait for gigabit Internet. However, I wouldn't be surprised to look out my window in five years to see a multitude of companies who want to get in on the action busy laying cable. That list may even include deep-pocket companies such as Apple and Microsoft. It behooves the cable companies to be among those doing the work, otherwise they will run out of customers and go out of business.

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:

[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?"](#)

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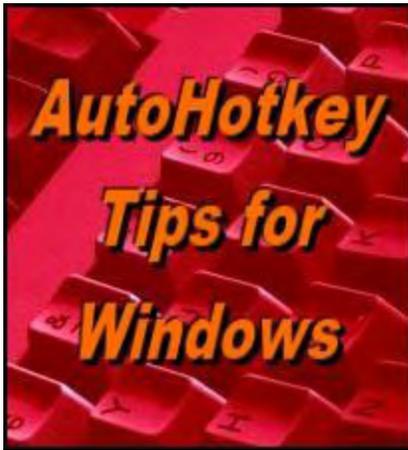
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and [That Does Not Compute!](#), brilliantly drawn cartoons by Jim Whiting for really stupid gags by Jack about computers and the people who use them.



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

AutoHotkey Tips for Beginners

**“Automatic Login for
Multiple Web Login Pages
and Thoughts about the**

FastKeys Utility Software” by Jack Dunning

Sometimes it easier to pop up a message box to pause an AutoHotkey script, plus questions about a user-friendly utility that uses AutoHotkey syntax.

I recently received the following AutoHotkey question:

I have some sites that put the username and password on different pages. So I modified the script as follows:

```
::a1@::username{return}password{return}
```

However, I need to pause after the first "return" until after the second page loads (i.e. the password page). Also, I'd like to precede the username and password with a line or lines in the same script so that it will first open the browser to the username page automatically. How do I accomplish these two things?

Ron Cerrato

I discussed the possibility of using AutoHotkey for usernames and passwords (with appropriate warnings about saving passwords) in this [column a few weeks ago](#). There are certainly many sites that change pages between entering usernames and passwords making the above script nonfunctional after the first page. The problem is that the script continues to run while the next page loads thus losing the password to outer space. The first thought may be to use the [Sleep command](#). (Remember, the *Sleep* command [placed at key points](#) in a script is used to slow down the execution of an AutoHotkey script. This prevents the execution of the lines of code from outrunning the action of the commands and the loss of subsequent functionality.) The Sleep command could be used to pause the script while the new page loads, however Web page loading times can vary considerably—sometimes as long as a few seconds. If the page has not loaded by the time the Sleep command times out, the password will not be entered in the second page.

The [WinWaitActive command](#) is also unreliable in this situation since a Web page may be

active, yet still loading data. This will also cause the script to continue before it can enter the password in the data field.

An easy way to ensure that the Web page has completely loaded is to force the script to wait for user input with the [MsgBox command](#):

```

:*.a1@::
  SendInput, username{return}
  MsgBox, Wait for next screen!
  Sendinput, password{return}
Return

```

This does require you to press the ENTER key once when you see the new page has loaded, but it's better than re-entering the password after the script misses it. (There may be more elegant ways to solve this problem in AutoHotkey, but this certainly works and is simple.) Note that it was necessary to switch from the one-line hotstring format to the command structure format terminated with the *Return* at the end of the snippet.

As for loading the Web browser first, that's as easy as copying the URL from the Web login page and loading it with the [Run command](#) at the beginning of the script:

```

:*.a1@::
  Run, https://www.website.com/loginpage.html
  MsgBox, Wait for next screen!
  SendInput, username{return}
  MsgBox, Wait for next screen!
  Sendinput, password{return}
Return

```

Again, with the variable times for loading Web pages, it may be easiest to use a *MsgBox* to stop the script execution.

Just in case the right Web page is already active, you may want to make the Run conditional with the [IfWinNotActive command](#):

```

:*.a1@::
  IfWinNotActive, [WinTitle] ;WinTitle as shown by Window Spy
  {
    Run, https://www.website.com/loginpage.html
    MsgBox, Wait for next screen!
  }
  SendInput, username{return}
  MsgBox, Wait for next screen!
  Sendinput, password{return}
Return

```

As discussed [last week](#), the window title can be found by using Window Spy when the Web page is loaded. This will prevent the browser from attempting to load again when the proper page is already active. The cursor will need to be in the username field.

* * *

I received the following e-mail:

Just wondering if you heard about this program ([FastKeys](#)) and or maybe you can write up an article/review on it. Looks promising but wanted another opinion before I buy.

Your AutoHotkey articles are great and look forward to future ones.

The e-mail wasn't signed, so I don't know if it was someone who actually wanted my opinion or the producer looking for a plug. However, the program itself brings up some important points to consider. FastKeys has a pretty decent review posted at CNET along with the download (free trial for 15 days or \$9.99 to buy). I didn't download the program, but I did read the [CNET review](#) and looked over the documentation.

FastKeys seems to be based upon AutoHotkey. I don't know whether it is a tailored compilation of the AutoHotkey source code or original work made compatible with the AutoHotkey scripting language. I suspect that it is a little of both. In either case, a significant amount of work went into building this Windows utility program.

FastKeys implements many of the AutoHotkey capabilities into a user-friendly program. Someone who knows nothing about AutoHotkey can use this program to get AutoHotkey features (hotkeys, hotstrings, menus, etc.) added to their Windows computer. There are a certain number of sample apps included such as the Menu's default choices for accessing "some of the most popular Web sites, such as Google, Facebook, and YouTube, as well as Yahoo! and Gmail."

Of note is the fact that AutoHotkey syntax is used to edit and add features in the FastKeys apps (see Figure 1). That means anything that you learn about AutoHotkey script writing will be useful with this program. It is unlikely that the program will run AHK files directly, but many snippets can be embedded in the system. I don't know the limits of compatibility between AutoHotkey's various versions and FastKeys but the Web site references the basic AutoHotkey site for code documentation. I'm guessing that many of the new features of AutoHotkey_L (the currently accepted version of AutoHotkey) are not supported by FastKeys. Of course, I could be wrong.

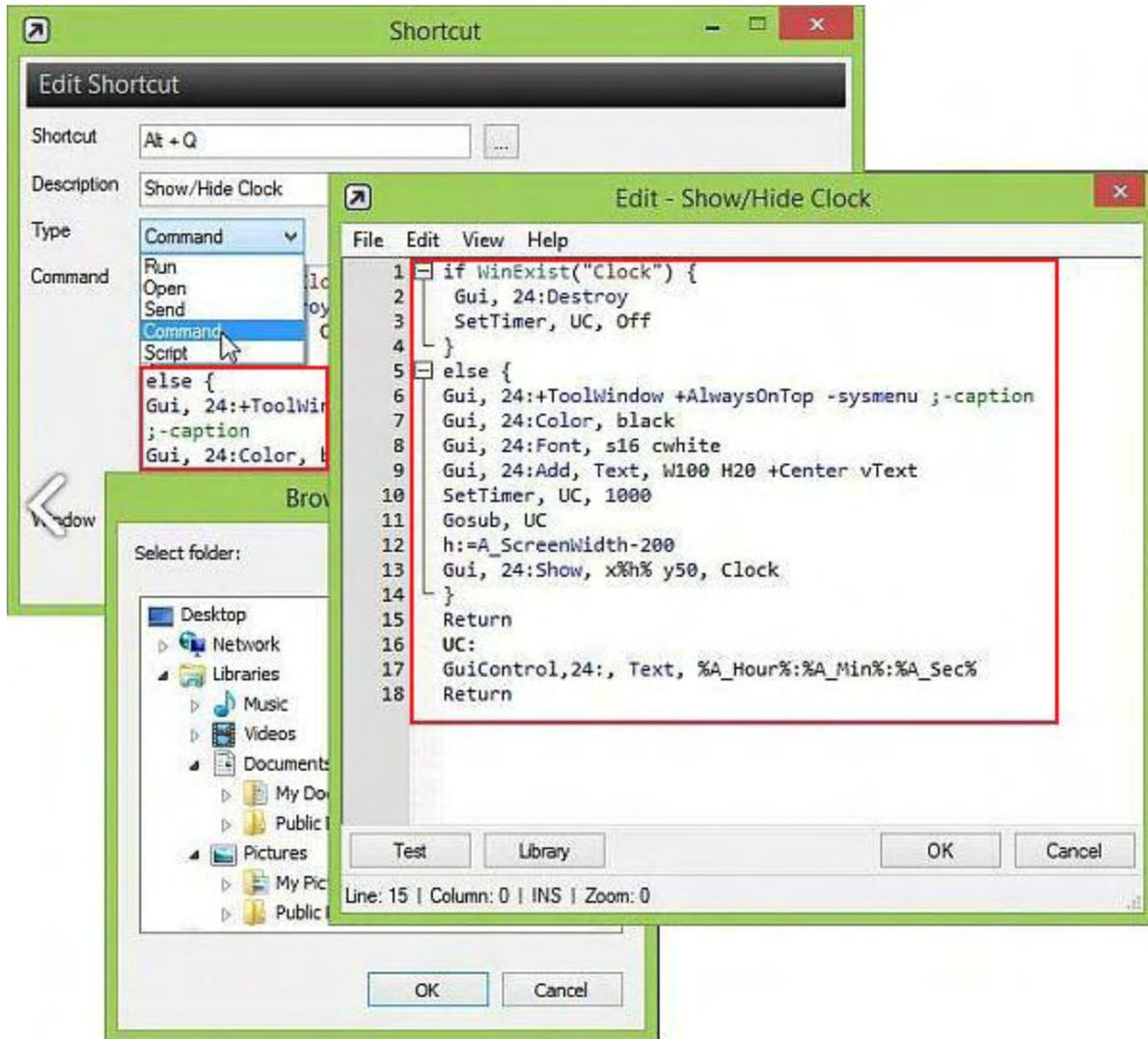


Figure 1. FastKeys uses the same syntax for writing snippets of code as AutoHotkey.

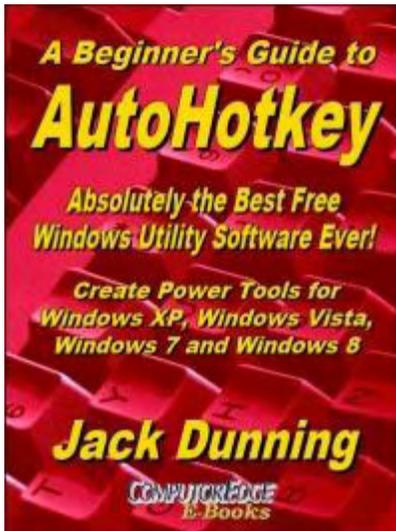
On the plus side, although it could be done, it would take you many hours (days or months) of scripting in AutoHotkey to simulate what FastKeys offers. On the downside, anytime you make software more user-friendly, some flexibility is lost. I'm sure that there are a few things that you can do with AutoHotkey that are next to impossible for FastKeys. It looks like FastKeys can handle all the basic AutoHotkey functions pretty well and it's possible that most AutoHotkey scripts can be inserted into the program in some way. But, if you're working on a fairly complex app, there may be no benefit to adding it to FastKeys.

Whether this type of program is right for you or not is totally dependent upon the kind of person you are. If you're looking for the basic benefits that AutoHotkey can provide without the hassle of writing the code yourself, then FastKeys could be well worth the \$10. Even then, you can still benefit from beginning level knowledge of AutoHotkey scripting. However, if you have many specialized uses for AutoHotkey at your work or home, then you may find that FastKey doesn't quite hit the mark.

I'm neither recommending nor disparaging FastKeys. I haven't tested it myself. The best thing for someone to do is download the 15-day free trial and run it through its paces. See if it does what you want. If you plan to test its limits, there are numerous AutoHotkey scripts posted at [ComputerEdge AutoHotkey Dropbox download site](#). I'm guessing that many of those scripts are already included in FastKeys in some form, but you might find a couple that just won't fit within the system.

For the people who either need more specialized apps or are really into doing everything themselves, then they might have no use for FastKeys. I'm probably one of the latter since my goal is to teach others how to write AutoHotkey scripts. There is no point in me looking for a user-friendly interface, since it would likely interfere with me demonstrating the inner workings and hidden mechanisms of AutoHotkey. On the other hand, the beginning level columns and books I've written would no doubt be helpful to anyone using FastKeys.

* * *



The new 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](#) offers a gentle approach to learning AutoHotkey.

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.

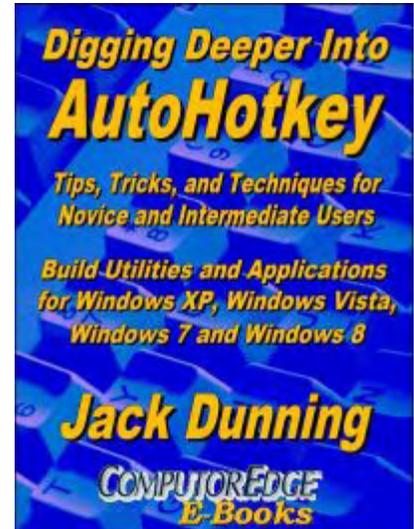
Based upon the series of articles in *ComputerEdge*, Jack takes you through his learning experience as he explores writing simple AutoHotkey scripts for adding repetitive text in any program or on the Web, running programs with special hotkeys or gadgets, manipulating the size and screen location of 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 latest AutoHotkey book which is comprised of updated, reorganized and indexed columns from *ComputerEdge* is now available at [Amazon for Kindle hardware](#) (or free software) users. Since the columns were not all written in a linear fashion, the book has been reorganized and broken up into parts by topic. The book is not for the complete beginner since it builds on the information in [A Beginner's Guide to AutoHotkey](#). However, if a person is reasonably computer literate, they could go directly to this book for ideas and techniques without the first book.



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

[For a PDF version for printing on letter size paper for inclusion in a standard notebook of Digging Deeper into AutoHotkey 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:

[*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

“Macintosh Computers Still Outselling PCs” by
Wally Wang

Wally Wang's Apple Farm

Macintosh Computers Still Outselling PCs; Growth Does Not Equal Success; The Hazard of Being Cheap; Security Updates for iOS; Free Mind Mapping software; Updating Java.

According to Needham & Company analyst Charlie Wolf, Apple sold 4.8 million Mac desktops and laptops during the last quarter with an average selling price of \$1,300. Last quarter's Macintosh shipments outpaced the PC market by 24.7 percent during the past holiday quarter. Since 2005, [Apple's share](#) of the personal computer market has grown from 2.1 percent to 5.5 percent.

Even though more people are relying on smartphones and tablets, enough people still are buying Macintosh computers. If you want to develop iOS apps, you'll have to buy a Macintosh, but for everyone else who doesn't need a Macintosh, it appears that many people still want one, even if they have to pay more for a Macintosh than the cost for a typical Windows PC.

To fight back against the Macintosh, Microsoft plans to [lower the price](#) they charge manufacturers to license Windows 8 from \$50 a copy to \$15. Will lower prices cause people to suddenly rush to buy a Windows 8 PC? Probably not.

Here's the first rule of marketing: Never compete on price. As soon as your only advantage is a lower price, someone can always undercut you and destroy your advantage. The more you lower your price, the harder you'll have to work for less money, which will definitely affect the quality of service you can provide. The lower your quality of service, the less satisfied customers will be, causing a certain percentage of them to defect for alternatives. So lower prices act as a death spiral that eventually pulls a company down the drain in pursuit of lower profits.

People used to buy PCs from Dell Computers all the time. Then as Dell's profit margins shrank, they cut costs by outsourcing their telephone support to India, which resulted in greater frustration from customers. A certain percentage of those customers simply left Dell as a result, which defeated the cost savings of outsourcing their telephone support to India in the

first place.

Saving money by reducing customer satisfaction is always a risky trade off. It's easy to see the cost of spending less for service. It's hard to see the cost of losing customers due to that same disappointing service.

As the PC market shrinks, there will be fewer sales to go around, which puts increased pressure on everyone. PC manufacturers can only cut costs so far before it's no longer profitable to stay in business any more, which Sony found out by abandoning the PC market.

Personal computers aren't going away, but they're no longer the only tool people need to browse the Internet, send and receive e-mail, and play around on social networks. As PCs last longer and newer models offer few reasons to upgrade as often, the PC market will likely remain stagnant. That makes the increased sales of the Macintosh surprising because if people aren't buying Windows PCs as often, why are so many people still buying Macintosh computers that cost more?

Growth Does Not Equal Success

In the book [*Brick by Brick*](#), author David C. Robertson makes a comment about what almost killed LEGO back in 2005. "LEGO began to confuse growth with success."

LEGO opened theme parks, developed new lines of toys, and sold more LEGO sets than ever before. What they didn't realize was that even though they were constantly growing, their expenses were higher than their profits to the point where they were losing money on nearly everything. LEGO had a huge share of the toy market, but they were literally paying for that market share.

When market share and growth are your only criteria for success, it's easy to ignore profitability. After all, if you have a large share of the market, won't profits magically come to you as a result? Unfortunately for many companies, the answer is no.

Look how many millions Microsoft has thrown away on ineffective advertising to promote Windows 8 and Vista, both of which have far lower market shares than the ancient Windows XP operating system. Look at how Google has grabbed more share of the smartphone and tablet market with Android, yet makes nothing directly off Android. Manufacturers of Android devices also have to pay royalty fees to Microsoft as well, which further cuts into their profits. With so many companies selling Android devices, the larger market share of Android doesn't translate into high profits for Android device manufacturers.

There's always an ideal ratio between growth and profitability. At a certain point, it will cost money to maintain further growth. LEGO found this out the hard way when they kept coming out with new LEGO kits, only to discover that they were losing money on most of them due to the need to buy special molds to make special pieces unique to that particular kit.

LEGO immediately cut back on the use of special pieces so they could reuse existing molds, thus lowering the cost of kit components so the company could actually make a profit. Then they also reduced the number of products they sold so that they could sell more copies of fewer products to lower the costs of making the same product while selling more of them.

Instead of striving solely for market share, LEGO started to look at both market share and profitability to maximize profits and market share at the same time. Given the choice between getting a larger market share or higher profits, they chose higher profits.

Getting a high market share means nothing if it costs you money. Imagine how much market share General Motors could grab if they gave away free cars and paid people \$1,000 a month to drive them around. Would that strategy increase market share? Yes. Would it increase profitability? No.

The Macintosh remains highly profitable for Apple, yet the Macintosh still retains a small share of the market. Windows PCs are barely profitable for most manufacturers although Windows PCs make up the largest market share. Making money through volume is a valid business model, but it's not the only one. Making money by selling fewer high-end products is another valid business model too, which explains how luxury brands like Hermes and Gucci make money.

To save money, LEGO once considered lowering the quality of their products until research told them that if they did that, they would lose their hard-core audience. After years of trying to appeal to everyone, LEGO decided that they really only needed to appeal to their hard-core fan base. Just by doing that, they could maintain profitability.

Every company is in business to make money first. If they can do that by grabbing market share, then market share is still secondary to making money. However, if a company can make money by appealing to a smaller segment of the market, the company is still achieving its goal of profitability.

Where companies go wrong is when they put market share ahead of profitability. If you think the only measure of success is market share, you've already forgotten the first rule of any business, which is to make money. Amazingly, companies lose track of this first rule all the time, and those companies often wind up trying to appeal to everyone while appealing to no one, which is Microsoft's current dilemma with Windows 8.

As LEGO proved, once you lose track of what makes you money, you can always regain your direction by trimming unprofitable businesses and focusing on the profitable ones. No company can sell products to everyone. Any company that tries will likely spend more money than they'll bring in. Just look at any company (think of JC Penny) that tried to appeal to a broader market while ignoring their core base and see how well they fared.

The Hazard of Being Cheap

Microsoft has consistently failed to compete against iOS and Android in the mobile phone market, so they're taking a new approach. Now Microsoft plans to target Third World countries with [inexpensive phones](#) to help build the Windows Phone market. The idea is that with so many people in Third World countries who need inexpensive phones, Microsoft can grab a sizable share of the market. Then if enough people use Windows Phone, more developers will write apps, which in turn will attract more customers to the entire Windows Phone ecosystem.

Here are the problems. First, success in catering to the low-end market does not automatically mean you can succeed in the higher-end market. Walmart successfully targets the low-end market, but Walmart will likely never pose a threat to high-end department stores like Harrod's. By initially targeting the low-end market, Microsoft can succeed, but they'll likely remain known as a low-end phone just like Walmart is known as a discount retailer.

Second, targeting the low-end market means selling in volume. In the commodity business like groceries, you can make money by selling the same items to the same customers. With smartphones, customers won't need to buy a new smartphone as often as they need to buy bread and eggs. So Microsoft will have to keep finding new customers and relying on growth to make a profit.

Once enough people get Windows Phone devices, Microsoft hopes to make money through selling apps. Unfortunately, people in the low-end market have far less money to spend compared to people in the higher-end markets that Android and iOS have taken. Trying to sell apps to poorer people will work, but you'll likely make far less money and once again, to make money you need to rely on multiple customers buying apps.

In the Android and especially the iOS world, customers typically have more money to spend so they tend to buy more apps and more higher priced apps. In the low-end market, Microsoft will likely sell fewer apps in general and those will be less expensive apps too.

Ultimately by targeting the low-end market for Windows Phone, Microsoft needs to flood the market with phones and hope to sell massive numbers of phones so they can continue making money through the large number of people buying apps.

This strategy might work because we already know that Windows Phone hasn't succeeded in competing against Android or iOS. It's basically the only strategy left for Microsoft so they might as well try it. Chances are good that Windows Phone will never dominate the smartphone market because Windows Phone is a decent, but not a revolutionary change from Android or iOS.

The way iOS took over the smartphone market was by being so revolutionarily different from Windows Mobile and Blackberry that people could see the obvious advantages. If Microsoft really wants to succeed, they need to come up with something that offers obvious advantages over Android and iOS that will make people want to abandon Android and iOS. Until Microsoft can come up with a revolutionary product like that, Windows Phone will likely

remain far behind Android and iOS. Even worse, Windows Phone still has to compete in the low-end market with Android, so there's likely a chance that it may not even succeed in that market either.

Windows Phone is a decent product that came too late and offers too few advantages over Android and iOS. Watch to see how Windows Phone fares in the Third World market currently still dominated by Blackberry. If people see a compelling reason to switch from Blackberry to Windows Phone, then that spells a minor success for Microsoft and complete disaster for Blackberry. If Windows Phone can't steal the low-end market from Blackberry and Android, then the future of Windows Phone will likely remain bleak.

Security Updates for iOS

If you're running iOS 7, update your operating system immediately to version 7.06, which [patches a flaw](#) that could allow hackers to gain access to your device. This flaw allows hackers to impersonate digital certificates used to authenticate Web sites.

While Apple has released a patch for iOS 7, a similar patch will be forthcoming for OS X. You can test to see if your version of OS X is vulnerable to this bug by visiting the [GoToFail site](#). If your computer is vulnerable, avoid using unknown Wi-Fi networks such as those found in public places like libraries and coffee houses and wait for Apple to provide a patch with the upcoming OS X 10.9.2 update.

goto fail; // [Apple SSL bug test site](#)

This is a test site to check whether your browser verifies the signature on the ServerKeyExchange SSL/TLS message.

YOUR BROWSER IS VULNERABLE, PATCH AS SOON AS POSSIBLE!

We have examined your OS and browser version information and determined that an active vulnerability test was appropriate. Unfortunately, your browser continued loading our test image after seeing an invalid ServerKeyExchange message. An attacker able to actively intercept your network connections (this is possible on most WiFi networks) can freely snoop on you, for example when you log into your bank account. Please check your browser and operating system for security updates and apply them right away. [Other applications on your system](#) such as mail, chat, financial, social networking and backup apps are also at risk - simply switching browsers will not fully protect you.

Please see [agl's writeup](#) for a full description of the bug.

Apple has released [official iOS updates](#) that resolve this issue.

A third party patch for OS X, which we have not reviewed and cannot vouch for, is available from [0wn1c](#).

This is an updated version of gotofail.com which is hopefully a bit more informative. The old version is [still available here](#). Please let me know (email address is at bottom of page) if it seems broken.

This site works by using javascript to inject a hidden image with event hooks to show the appropriate message depending on whether the image loads successfully. The image is hosted on a web server which has been modified to make its ServerKeyExchange message signatures invalid. The invalid signature will cause the connection to abort when the signature is checked, provided that the signature is actually verified.

For more browser SSL/TLS testing check out [How's my SSL?](#)

If you'd like to donate, feel free to send bitcoin to [13xUQVhysEDDcUoN80tA8CEKCR9yir](#) or give something to EFF. For mail, hate mail, bug reports, etc to [gotofail@gotofail.com](#) or [@gotofailcom](#); but requests for server source code will be ignored until everyone has had time to patch. Thanks to Jacob September for help with the stylesheet.

Figure 1. The gotofail.com site can detect if your computer may be vulnerable.

As a general rule, never do anything important when connected to any public Wi-Fi network. You definitely don't want to share your data with anyone who might have access to these Wi-Fi networks since you never know their true motives. Just treat Wi-Fi like mailing a postcard

where everyone can see your data. If you're not comfortable sharing something on a postcard, you probably don't want to share that same information on a Wi-Fi network of any kind, even your own Wi-Fi network since you never know who can intercept those signals.

Free Mind Mapping software

Mind mapping is an alternative to outlining. The main idea behind a mind map is to jot your ideas down and then using color, graphics, and links, you can better associate related ideas to create a visual thinking aid and study tool. People have used mind maps to help them learn foreign languages, math, and history.

While there are plenty of commercial mind mapping programs, you might be interested in [FreeMind](#), which is written in Java so it can run on Windows, OS X, and Linux (just as long as you have Java installed on your computer). With FreeMind you can experiment with mind mapping to see if you like the idea of visually organizing your thoughts on a screen. Some people find mind mapping fascinating while others don't, so before you spend your money on any mind mapping software, try FreeMind first.

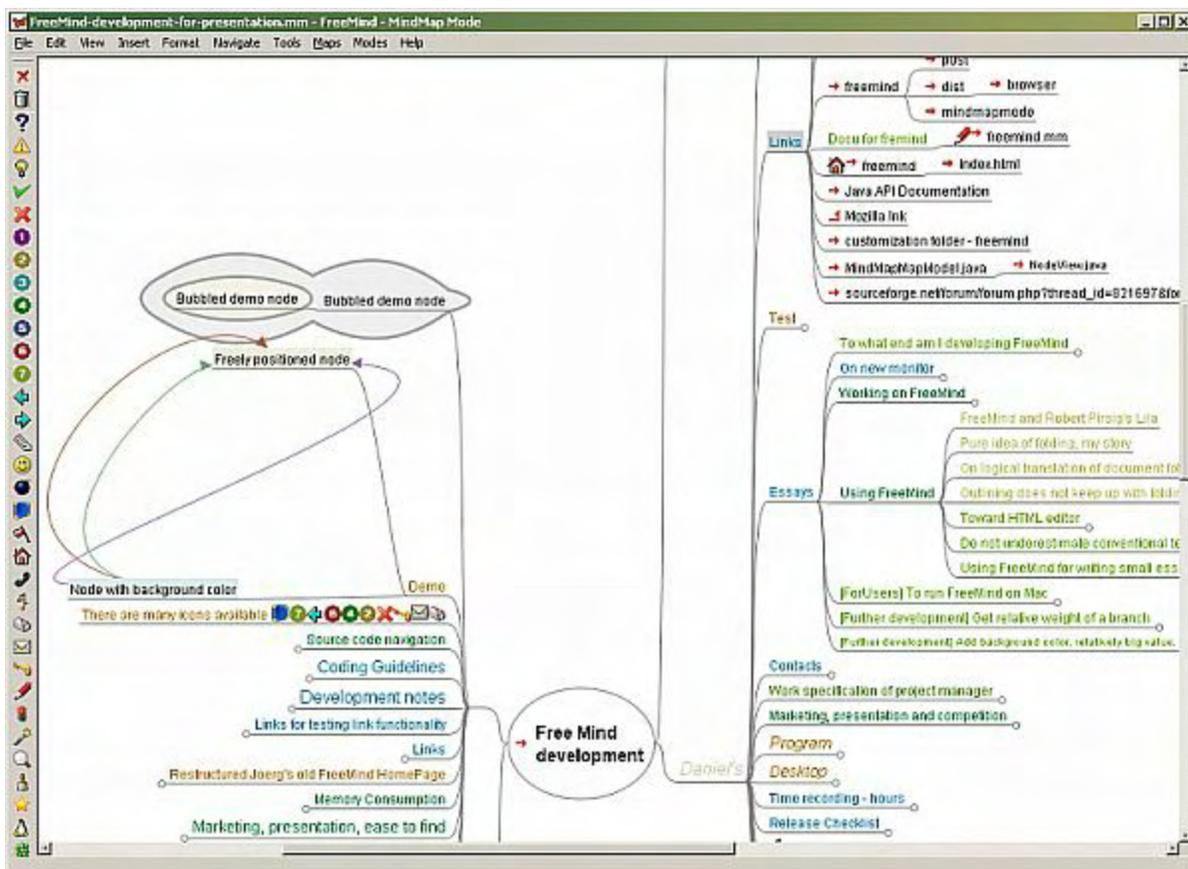


Figure 2. FreeMind lets you create mind maps.

* * *

Since Java can run on multiple operating systems, it's a favorite target for hackers along with Flash. To make sure you're running the latest version of Java, click the Apple menu and choose Preferences to open the Preferences window.

Then click the Java icon to open the Java control panel window. Click the Update tab and you can see which version of Java you have and whether you need to update to a newer version.



Figure 3. The Java control panel lets you update your version of Java.

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](#)

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

A Crime Fighting...Hairclip?; Facebook's WhatsApp Acquisition; Asus/Google Nexus 7 Tablet 2nd-Gen (2013).

A Crime Fighting...Hairclip?

Richard Neil writes in with info about a pretty fascinating little gadget from First Sign Technology: First Sign Technology has announced the launch of the first-ever Hair Clip that serves as an automatic personal security system against violent crimes. The First Sign Hair Clip features a mobile application that automatically calls for help and begins to collect evidence at the first sign of an emergency.

The Hair Clip's automatic alarm is activated when forces associated with a violent attack are detected with the hair clip's accelerometer and gyroscope. It then uses a built-in cell phone to collect more evidence and call for help while the phone's speaker lets the attacker know that "evidence has been collected and help is on the way."

"Violence against women is far too common and this is the first solution to not only be automatic, but to focus on increasing the prosecution rate," said First Sign Technology co-founder Rachel Emanuele.

Features in a nutshell:

Automatic: An automatic alarm trigger is critical because the majority of attackers use the element of surprise, or your trust, to catch you off guard.

Great Alternative to Weapons: Firearms, knives, stun-guns, pepper spray, panic buttons and cell phones all become useless when the attacker has the element of surprise, or even worse, your trust. Moreover, it is uncertain how anyone will react under duress.

Lifestyle Friendly and Fashionable: The hair clip can be worn discretely concealed under the hair, as a fashion accessory, or clipped somewhere close. Either way, the clip is "out of sight and out of mind" but it will never stop working for you. There will be a 15-second window to deactivate in the rare case of a false alarm.

Offers Deterrence: The deterring effect starts by notifying the attacker with the phone's speaker that "Evidence has been collected and help is on the way." The attacker will no longer be able to act without consequences.

Prosecution: Evidence is immediately collected once the alarm is activated. A microphone on the hair clip transmits audio evidence while the phone is used for its camera, GPS, speaker, and cell signal. The evidence is streamed to the monitoring station so all evidence will remain available to prosecutors even if the phone is destroyed.

Situational Uses: The Hair Clip can be used when dating, walking at night, driving, exercising alone, traveling, when workers are in your home, conducting a Craigslist or similar transaction, and more.

Cutting Edge: A paradigm shift in the security industry is underway. Companies such as ADT have already changed their strategic plans to focus on "Everyday Security." First Sign Technologies is on the cutting edge of the shift in personal safety. They are the first mobile security system against violent crimes and the only solution that has the capability to identify, deter, apprehend, and prosecute attackers.

Where to Buy: First Sign is accepting pre-orders and contributions through their [Indiegogo crowdsourcing campaign](#).

Here's and Infographic illustrating how it works (also found at www.indiegogo.com):

USING FIRST SIGN HOW IT WORKS

1 IN 3 women will be assaulted in their lifetime, and many of their attackers will never be caught, let alone prosecuted. While there are self-defense options out there (firearms, stun guns, cell phones), many of them are unrealistic or simply incomplete.

Learn about how First Sign Technologies provides a fully automatic response to an attack and collects the evidence needed to help prosecute the attacker.

PLACE THE CLIP IN YOUR HAIR OR ON YOUR CLOTHES, close enough to your body to measure it accurately.

The **ACCELEROMETER** and **GYROSCOPE** detect an impact.

In the **100 case** of a **FALSE ALARM**, you can deactivate the alarm. If you are a **repeat**, the device will automatically go into **STUNNER'S MODE**.

If you haven't deactivated the device after **15 SECONDS**, professional security monitors review the event in real-time.

First Sign uses **BLUETOOTH** TO ACCESS YOUR PHONE'S **GPS, CAMERA, AND MICROPHONE**. It also uses the phone's cell signal to call and transmit this info to the monitoring station.

If alarm not deactivated, **MONITORS REVIEW THE EVIDENCE** and alert emergency contacts with incident address, the device first responder number relative to the user's location and the level of an impact detected in terms of high, medium, low.

Pictures taken **INTERMITTENTLY FROM PHONE'S CAMERA** during alarm and audio evidence continues to be backed up at the monitoring center.

The attacker is **IDENTIFIED, DETERRED, APPREHENDED, AND PROSECUTED**.

FIRST SIGN VS. THE OTHERS

TYPE OF USE	COST	EFFORT
Traditional security systems Installed STATIC system protects property the same way every time. \$400/MONTH, \$500+WORTH with 1000 monitoring expansion hardware. Familiar to user, protects against burglary, requires perimeter, GREAT WHILE SLEEPING .	FIRST SIGN CONCEALED IN HAIR CLIP, OUT OF SIGHT AND OUT OF MIND, MOBILE APP DELIVERY . FREE MOBILE APP, 100+ MONTHS MONITORING, INDIVIDUALLY MONITORED .	Weapons and self-defense YEARS OF TRAINING to be proficient, high situational awareness to use. DEFENSIVE WEAPONS, PERMISSIONS, PERMISSIBLE, MONTHLY SELF-DEFENSE TRAINING. If well-trained, can POTENTIALLY END EMERGENCY SITUATION without any external support.

www.firstsign.com

Facebook's WhatsApp Acquisition

Eden Zoller, Principal Analyst, Consumer Telecoms, with [Ovum](#), comments on Mobile World Congress (MWC 2014) held this past month in Barcelona, Spain:

Facebook's acquisition of WhatsApp should come as no surprise and makes sense for both parties, although there are some key challenges ahead in terms of how Facebook develops and monetizes WhatsApp going forward.

The social messaging market is growing rapidly, with messaging volumes to reach 69 trillion with subscribers growing to 1.8 billion by the end of 2014 according to Ovum forecasts.

An immediate benefit to Facebook in the WhatsApp acquisition is that it has enabled two strong social messaging players to be on the same team. WhatsApp is a player which is strong in both mature markets as well as emerging markets across Asia and the Middle East, which present a significant growth opportunity for Facebook.

At the same time, Facebook is growing its mobile footprint with close to a billion monthly active mobile users. This makes innovation in mobile services and capabilities an imperative, either organically or by acquiring best in class applications like WhatsApp.

With the acquisition Facebook has gained access to WhatsApp's large repository of phone numbers, which was a missing link for Facebook's user information. The access to phone numbers now bridges the offline and online worlds of Facebook users.



WhatsApp will also enhance Facebook's mobile strategy and makes the service grow faster and be stickier with mobile first users. Facebook will in turn provide WhatsApp with the funds

and resources it needs to develop the service and become an even stronger competitor in an increasingly over crowded messaging market.

There are questions as to how Facebook will position WhatsApp and its own Facebook's own Messenger application in the longer term. In the short term at least they will continue to operate as standalone, separate applications. Facebook Messenger has met with success and according to Facebook the application saw a 70 percent increase in usage during the fourth quarter of 2013.

However, it seems likely that that the two messaging services will eventually be merged, possibly under the WhatsApp brand that has greater resonance with consumers than Facebook Messenger.

Facebook will need to develop WhatsApp but must ensure it does so in a way that does not compromise the appeal of the core service that has proved so popular with users.

Under its own management, WhatsApp has made a point of staying true to its messaging roots and aimed to remain a pure play messaging service by avoiding broadening the platform to support additional services such as games."

Asus/Google Nexus 7 Tablet 2nd-Gen (2013)

Product: Nexus 7

Manufacturer: Asus (for Google)

Web site: play.google.com

Price: About \$220 (16GB), \$265 (32GB)

Note: Can also be purchased with wireless cell option from AT&T, Verizon, and others

The newest incarnation of Google's Nexus 7 tablet (2013) is pretty amazing. While very similar in size to the 1st-gen (2012) model (slightly lighter, thinner, narrower), the Next Gen definitely goes where no Android tablet has gone before with significant improvements in resolution, power, memory, and OS.

The 7.02" 1920x1200 HD display is superb with rich, deep colors. It's hard to image why resolution would need to go much higher—but we all know it will (probably eventually topping out at 4K).

 Google NEXUS 7 (2013) vs Apple IPAD MINI	Google Nexus 7 (2013)	Apple iPad Mini
Starting Price	 \$229	 \$329
Operating System	Android 4.3	iOS6
Processor	1.5-GHz Qualcomm Snapdragon S4 Pro	Dual-core A5
Display	7 inches/1920 x 1200	7.9 inches/1024 x 768
RAM	2GB	512MB
Storage	16GB	16GB
Front/Rear Camera	1.2-MP/5-MP	1.2-MP/5-MP
Wireless	802.11a/b/g/n, Bluetooth, NFC, 4G LTE (optional)	802.11b/g/n, Bluetooth
Ports	1 microUSB, headphone	Lightning, headphone
Dimensions	7.9 x 4.5 x 0.3 inches	7.9 x 5.3 x 0.3 inches
Weight	10.22 ounces	11 ounces

Image courtesy of laptopmag.com

On a side note, it won't be long (when they get the front-facing camera's resolution up to the rear's and add a front-facing light) before the best mirror you've ever used will be your tablet (insane resolution, filters, effects, and magnification at a detail level that will get a little more depressing with each passing birthday).

Camera resolution is not-dazzling, but still a very respectable 5MP. The front-facing camera is 1.2MB; same as the 1st-gen's. The Nexus 7 finally has a rear-facing camera (the 1st-gen model did not).

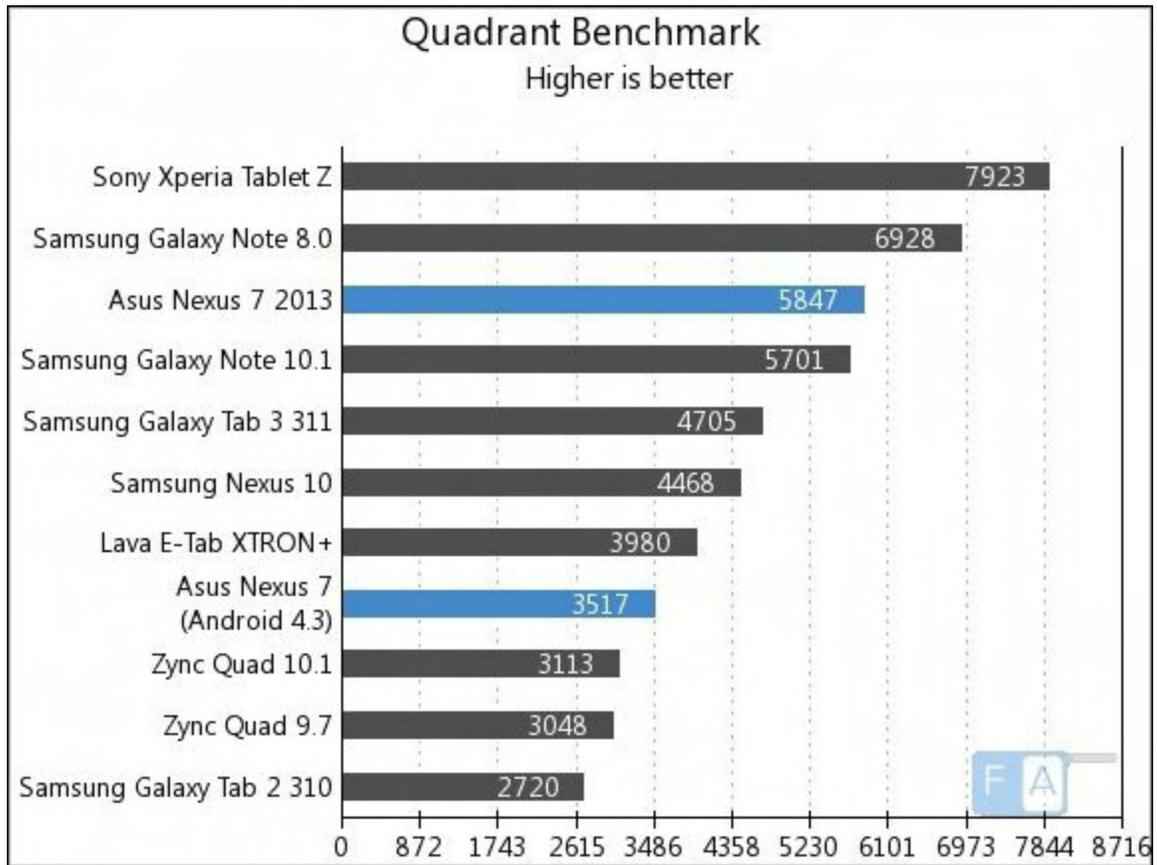


Image courtesy of fonearena.com

Side note #2: Interestingly, if you take the back off of a 1st-gen Nexus, you'll see a lovely little cutout for what was likely going to be a camera module that was ultimately left out left of that model.

Side note #I've lost count: For those of you sticking with your 1st-gen Nexus 7, you actually *can* take pics with it but, to do it, you have to be content with the much lower res (1.2MP) front-facing camera designed for video chatting. It's also tricky pressing the on-screen snap picture button, since it's faced the wrong way. But it can be done.

 Specs Compared	New Nexus 7 	Old Nexus 7 
Starting Price	\$229	\$199
Operating System	Android 4.3	Android 4.2
Processor	1.5-GHz Qualcomm Snapdragon S4 Pro	NVIDIA Tegra 3 quad-core
Display	7 inches/1920 x 1200	7 inches/1080 x 800
RAM	2GB	1GB
Storage	16GB	16GB
Front/Rear Camera	1.2-MP/5-MP	1.2-MP/No Rear Camera
Wireless	802.11a/b/g/n, Bluetooth, NFC, 4G LTE (optional)	802.11b/g/n, Bluetooth, NFC
Ports	1 microUSB, headphone	1 microUSB, headphone
Dimensions	7.9 x 4.5 x 0.3 inches	7.8 x 4.7 x 0.41 inches
Weight	10.22 ounces	12 ounces

Image courtesy of laptopmag.com

Battery life is excellent. I can get 8 hours easily, even watching videos and playing games. It sips power.

The 2nd-gen Nexus 7 is crazy-fast. Apps seem to load *before* you tap their icon (hmm, let me check on that; I'm not sure that's technically possible—yet). Multitasking is excellent. The extra 1GB of memory (2GB vs. the 1st-gen's 1GB) allows you to juggle all kinds of stuff with nary a speed hiccup. Video playback is extremely smooth.

On that note, the 2nd-gen Nexus 7 has one very big thing going for it that the 1st-gen model did not have—especially for anyone who wants to play back video using an HDMI cable. It's called a SlimPort. The SlimPort is actually the standard microUSB port located at the bottom of the device you're already using for charging or to connect to your computer's USB jack to transfer data.



But the 2nd-gen model has managed to jam full HD video and sound output into that little guy. You'll have to buy an adapter (that plugs into the Nexus' SlimPort; about \$30 on eBay or Amazon)) and has a female HDMI jack on the other side.

Essential: Since the adapter's own microUSB plug will be hogging the Nexus' *only* microUSB/SlimPort jack, you won't be able to charge your tablet while playing back videos. So make sure you buy an adapter with a built-in jack that allows you to use your standard AC goodie to charge your tablet.

Yes, you can use Google's neat little Chromecast (\$35) device to watch video. Chromecast plugs into one of your TV's HDMI jacks and allows you to wirelessly stream video to it from your tablet via Wi-Fi, but it's currently *very* difficult to find an Android app that can play personal videos—for example, MP4s of your vacation trip you shot that day on your smartphone. Chromecast generally only works with pre-approved, commercial portals like Google Play, YouTube, Netflix, Hulu, etc.—and Google should change that...*right now*.

You can also wirelessly stream using a feature called Miracast (built into virtually every 4.2 or higher Android device, including the 1st-gen Nexus 7 tablet) to a device like Netgear's [Push2TV](#) (about \$60). We're hoping to get an eval soon for future review.

The nice thing about Miracast is that, unlike Chromecast which only works in tandem with an existing Wi-Fi network, you're streaming directly from your Android device right to the Push2TV or other manufacturer's receiver.

Android 4.3 adds multi-user support which means you can create profiles for different people and even place restrictions that limit content and purchasing options. No more \$1,000 Google Play bills for the in-app video game purchases junior makes.

What could be better about the Nexus 7? The rear-facing camera is a welcome addition, so an LED light would be even more, uh, welcome-er.



Specs (from Google):

Screen

*7.02" 1920x1200 HD display (323 ppi)
1080p HD IPS*

Scratch-resistant Corning® glass

Camera

*1.2MP front facing, fixed focus
5MP rear facing, auto focus*

Size

114 x 200 x 8.65 mm

OS

Android 4.3

Wireless

Dual-band Wi-Fi (2.4GHz/5GHz) 802.11 a/b/g/n

Bluetooth 4.0

NFC (Android Beam)

Dual stereo speakers

*Surround sound, powered by Fraunhofer❖
3.5mm audio connector*

Memory

*16 or 32 GB internal storage (actual formatted capacity will be less)
2 GB RAM*

*Ports**Micro USB**SlimPort™ enabled**Battery**3,950 mAh (Up to 9 hours of active use)**Wireless Charging built-in (Qi compatible)**CPU**Quad-core Qualcomm Snapdragon™ S4 Pro, 1.5GHz**GPU**Adreno 320, 400MHz**Sensors**Accelerometer**GPS**Compass**Ambient light**Gyroscope*

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

"Username Password Script," "4K TV!" "Gmail MAPI," "Windows Remote Assistance"

Username Password Script

[Regarding the February 7 [Easy Beginner AutoHotkey Tricks You Should Use with Windows column](#):]

I have some sites that put the username and password on different pages. So I modified the script as follows:

```
:::a1@::username{return}password{return}
```

However, I need to pause after the first "return" until after the second page loads (i.e. the password page). Also, I'd like to precede the username and password with a line or lines in the same script so that it will first open the browser to the username page automatically. How do I accomplish these two things?

-Ron Cerrato, San Diego, CA

Hi, Ron,

I've addressed your questions in [this week's AutoHotkey column](#).

-Jack

4K TV!

[Regarding Jack Dunning's February 14 [article](#), "Forget 3D, Now Its 4k Televisions":]

The biggest problem with HD TV is that true high definition is only on OTA (Over The Air) TV. All other inputs is in the "standard analog" video 704X480 pixel (4/3 format. Comp., HDMI, S video from Blu Ray players, cable TV box, VCRs, PCs, etc. are *not* 16X9 format! All 16X9 formats are compressed to 4X3 analog video that the big screen TV has to make wide to 16X9 format. The larger the TV screen the more apparent loss of high definition

between OTA TV and cable on live sports programming! That is the compromise to make it downward compatible to the old 4X3 analog system. If industry does this compromise on the 4K HDMI 2.0 shame on them!

-Walter, San Diego, CA

Gmail MAPI

[Regarding the February 14 [Digital Dave column](#):]

There are many solutions to using Gmail to send attachments using the Windows "Send To..." context menu, most of which are free. Use Google to search for "gmail mapi" to find them. More information about MAPI is available on [Wikipedia](#).

-Darrell G, San Diego, CA

Windows Remote assistance

[Regarding the February 14 [Digital Dave column](#):]

Dave, is there a way to do Remote Assistance from a Mac to a Windows computer?

Thanks for the great column!

-Frank, Lakewood, CO

Yes, Microsoft has an app available at the [Mac App Store](#) which allows a [Mac to control a Windows computer](#) remotely. I would guess that the remote Windows computer still needs to be the business/professional version or above.

-Dave

ComputerEdge 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 [ComputerEdge.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 "ComputerQuick 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 [ComputerEdge E-Books](#).

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