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Is Google Glass Dead?

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Is Google Glass Dead?

With Google pulling back on its funky computerized eyeglasses, many are predicting its demise. Are these forecasts premature?

Magazine Summary

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Digital Dave
by Digital Dave

Digital Dave answers your tech questions.
Audio Breakups in Windows Media Player; Using Wi-Fi Router Ported through a Home-Wiring Network.

Google Glass Failure(?) and eSight Glasses
by Jack Dunning

Was Google Glass a Mistake or Merely a First Step? eSight Helps the Legally Blind to See.
While pundits argue over the latest move by Google, the computerized eyewear technology is taking hold elsewhere.

Using AutoHotkey to Draw a Straight Line in Windows Paint
by Jack Dunning

While You May Never Need to Do This, the AutoHotkey Techniques Apply to Many Other Applications
Jack continues investigating using AutoHotkey drawing controls in Windows Paint.

Wally Wang's Apple Farm

by Wally Wang

A Tale of Two Companies

A Tale of Two Companies; LiveCode App Programming Course; Competing in the Commodity Market; YouTube Dumps Flash for HTML5; Outlook as the Best iOS Mail Client?; Programming Around the World; Remove Icons from Menu Bar.

[Editor's Letters: Tips and Thoughts from Readers](#)

by ComputorEdge Staff

Computer and Internet tips, plus comments on the articles and columns.

"OSX Review," "Password Management," "System File Checker," "Those "Useless" Cursor Keys"

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Digital Dave

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

Audio Breakups in Windows Media Player; Using Wi-Fi Router Ported through a Home-Wiring Network.

Audio Breakups in Windows Media Player

Dear Digital Dave:

This past weekend I experienced some audio breakup problems while using my laptop.

The background: Every year at this time I get recruited to act as the volunteer DJ for after dinner dancing at a club holiday party since I have a suitable sound system. I "spin" oldies from my extensive MP3 collection for our mostly baby-boomer members.

During the course of about 1-1/2 hours of dancing the music randomly broke up about 6 to 8 times for about 1 to 2 seconds each time, just long enough to disturb the beat and thus drive the dancers crazy. The audio breakup was clearly a computer timing issue and strongly suggests to me that the CPU was overloaded and briefly not processing the music in a timely way.

The computer is a two year old HP laptop with an Intel Core i3 processor which originally came with Windows 8.0 but has since been upgraded to 8.1. When I first got it I went to considerable trouble to delete/uninstall the vast majority of those terrible Windows Tiles which I didn't need or want (and they apparently stayed uninstalled during the 8.1 upgrade). Additionally, the laptop has almost no special after-market software installed as I use it almost exclusively for Web-surfing and e-mail. I play MP3s using the Windows Media Player (v12.0) that came free with the computer. For last weekend's DJ performance I disabled Norton Anti-Virus Auto Protect to prevent it from using the CPU and note there was no Wi-Fi available and thus no internet connection which could allow unintended updates from downloading and running.

So, I have a pretty "plain vanilla" laptop which I would expect should have plenty of horsepower available to reliably play .mp3s yet I still had timing drop outs. (I considered using Task Manager to see if I could find the problem, but was busy queuing up tunes and figured I'd have trouble identifying random short problems using Task Manager anyway.)

Do you have any suggestions I can try next time. Thanks.

Ted Hine
Louisville, CO

Dear Ted,

When I hear about audio/video breakup (an unwanted pause while playing), I think of buffering. The buffer is a small bit of memory set aside for streaming audio or video to your media player. The stream is fed into one end, decompressed and sorted out before sending it out the other end. If the receiving takes too long the buffer empties and there is nothing to send out the other end. Also, if the decompression or sorting takes too long, the data may not be ready to be sent out. (This latter situation is less likely with today's computers.)

For example, if you have a slow Internet connection when using Netflix streaming, you may occasionally see the video stop while the system rebuffers. This happens because the buffer runs out of data or takes too long to decompress and sort things out. If the buffer is too small, you're much more likely to experience these pauses as it runs out of data. The solution is usually to make the buffer larger. However, if the buffer is too large, there will be a greater delay (latency) between when the data is received and actually played. This is not usually a problem unless you're syncing more than one source.

Since you're using Windows Media Player, that's the place where you will make the buffer size adjustment. Open Windows Media Player and select Options… from the Organize menu (or ALT => Tools => Options… from the Classic menu bar). In the performance tab you will find Network Buffering (see Figure 1).
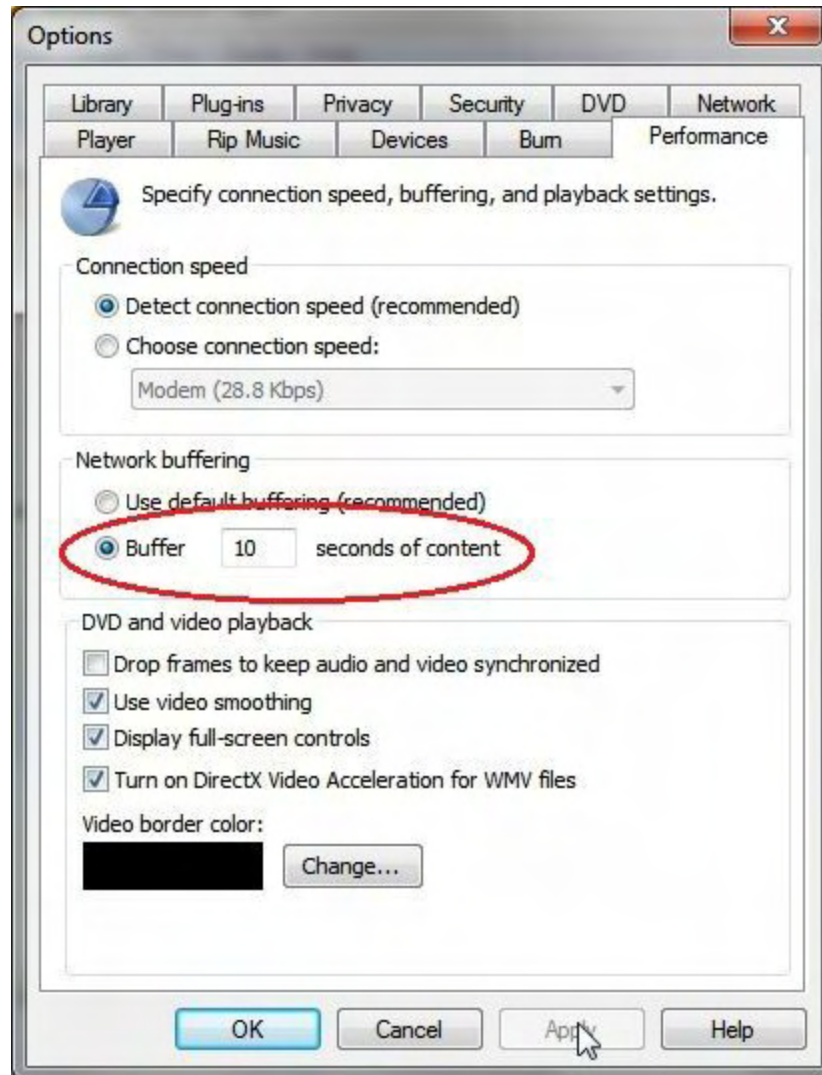
Figure 1. The buffering setting can be adjusted in the Performance tab of the Windows Media Player Options window.

The default buffer is 5 seconds so I would suggest you adjust it to at least 10 seconds. That should more than account for the 1 to 2 second pauses you're experiencing. Click Apply. Run some tests.

It's possible that something else is causing the problem, but this is my first and best guess. I hope it works out.

Digital Dave

Using Wi-Fi Router Ported Through A Home-Wiring Network

Dear Digital Dave,

I ran into a knotty problem, which is perplexing.

Scenario: Upstairs, my ISP Modem is connected to a 4-port NAT router with Hardware Firewall.

To take the signal from this router downstairs, I use two Netgear Household Wiring (120-volt) adapters, which do a good point-to-point job (100 Mbps) to a laptop PC downstairs.

Now I want to use a Wi-Fi router downstairs for a Tablet PC, so I connected it to the aforesaid Netgear adapter there. When the downstairs laptop was connected by cable *to this Wi-Fi Router, it worked fine. When I went to unhook the cable and switch over to wireless, it says "No Internet Connection".*

Perplexed, I repeated the hook-up of the Wi-Fi router directly to the first Router-Firewall (upstairs, connected to the ISP Modem) and it worked fine on cable*. I then unhooked the cable to that router and went on Wi-Fi and it also worked fine there. So, I went back downstairs (without changing anything) and repeated the experiment and again, it worked fine on* cable *connection, but when I switched to wireless (802.11g), I get "No Internet Connection."*

What could be causing the same Wi-Fi router to act differently between the Cable connection and the Wi-Fi (wireless) connection only when it is getting its signal through the house wiring (via. Netgear adapters)?

I'm at my wit's end on this. Any advice would be appreciated. (In advance, thanks for any help.)

AJ Dalton
Bonsall, CA

Dear AJ,

When using a Wi-Fi router which also has Ethernet ports (most do), it's best to realize that the router is actually two devices in one. First is the Ethernet hardwired router and second is the Wi-Fi router. They operated independently—almost.

The home wiring connection is obviously affecting the connection since it is only when you're using that access point that you have a problem. The reason the hardwired network works is because your Ethernet connection is merely acting as a switch rather than a router. Anything you plug in will be treated as a single device. The Wi-Fi portion of the router has no automatic switching capability and must be set up as a router.

Whenever I hear about a particular network connection not working, one of the first things I consider is an IP address conflict. This happens when more than one device is assigned the same IP by a router. Usually neither device will connect. It's possible that the IP which the

router was assigned upstairs won't work downstairs after going through the house wiring setup. You might want to try clearing, changing, or renewing the IP address in the router setup. Check the manual for how to do that.

The usual IP address for a router is 192.168.1.1, but if this is taken by another router or device, then there will be a conflict. You can go into the router setup and change this to another IP on the same network (i.e. 192.168.1.xxx). However, if you happen to pick an IP which is used by another computer, printer, or other network device, you will still have a problem. In these situations I usually assign a fixed IP address which is highly unlikely to be assigned to a new device such as 192.168.1.100. (The router would need to assign 100 IPs before reaching this one.)

The key is to get the router and everything else on the same network using different IP addresses. Look at the Ethernet and Wi-Fi setup of the router (and all other computers and devices on the network) and make sure that there are no conflicts. Once this is done, everything usually starts working—but not always.

As an aside, I wonder why you don't just run your Wi-Fi from upstairs. The latest Wi-Fi routers (802.11n) usually have enough range to cover an entire house, unless the floor between the two levels is lined with aluminum foil.

Digital Dave

Google Glass Failure(?) and eSight Glasses

"Was Google Glass a Mistake or Merely a First Step? eSight Helps the Legally Blind to See." by Jack Dunning

While pundits argue over the latest move by Google, the computerized eyewear technology is taking hold elsewhere.

Google recently decided it would suspend the consumer offering of Google Glass. The price was too high for anyone other than the most dedicated technophiles. Google "ultimately retreated, announcing just two weeks ago that the product would not be offered to consumers and that the group responsible for Google Glass would be re-organized with a new leader on top." Many technology writers regard this as an admission of failure and that the wearable device will never be accepted by the market. The glasses look geeky and people fear the anyone using them is constantly recording any activity within their view—which of course they would if there were anything worthwhile to record. This could be the last that we see of this version of Google Glass (see Figure 1), but it's unlikely the end of the technology.

Figure 1. Google Glass has not been well received in the consumer marketplace.

The truth is that Google Glass is anything but a failure. As an experiment in wearable technology it was a tremendous success. If you measure experimental results by what you learn, then Google has reaped incalculable dividends. Yes, they learned that the consumer market wasn't ready for the device, but the business world is just getting started. In fact competitors Sony (SmartEyeglass Attach!) and Microsoft (HoloLens) have introduced their own eyewear technology—although not necessarily in the same market as Google Glass.

Figure 2. Sony's SmartEyeglass Attach! is aimed at the OEM market for other companies developing applications.

While the consumer market may not be ready for eyeglass computers, there are many professional and medical uses for high tech spectacles. These applications will keep Google and the others developing the devices and refining the technology. The commercial use of geeky headwear (where it's always acceptable to look silly) will both bring down the price and increase the acceptability of donning them. Eventually, the consumer market will be ready for sleeker and less expensive (maybe about $200) peepers.

Figure 3. Microsoft's Hololens could be a direct competitor to Google Glass.

There are uses for Google Glass in many non-consumer markets. Applications in the medical field are pursued where doctors may wear the eyewear to record an office visit for transcription or an EMT might wear the device while getting real-time backup from an MD who's remotely viewing the emergency scene. Engineering fields are developing ways to use Google Glass in the field for reviewing plans and documents while involved in construction and/or a repair. What these uses all have in common is the need to work with two hands while staying in communication, viewing data, or recording the scene.

No-Hands Computing

In past articles, I've referred to using a tablet as one-handed computing. The finger is used to poke at the tablet while the other hand supports the device. Google Glass has introduced no-hands computing to the world. While the current model might disappear in its present form, the concept of no-hands computing will not. It is a remarkably liberating activity.

Have you ever tried to use your computer while holding a phone to your ear? Not easy is it? While using two hands when working on a keyboard has become natural for most people, the awkward one-finger approach to typing (while holding a phone to your ear) is slow and frustrating. One solution is to put the caller (or tech assistant) on speakerphone. This works, but even better is plugging a headset into your phone. Freeing up both hands for computer

activities is much easier and quicker than suffering through the constant fumbling with the phone or jacking up your shoulder to hold the device up against your jaw and ear. Spend too much time in that position and you're likely to get a crick in your neck.

The idea of computer glasses solves the ear, eye, and hand problem. Voice recognition has improved enough to make voice control not only feasible, but desirable. No need to hold any listening device to your ear. Need to view alternative images? That's what computer eyeglasses are all about. But most importantly, the hands are free to do the real work of the job. Not only are they freed from holding a smartphone, but they are freed from doing any computer work at all—even poking at a tiny screen. (This obviates the problem caused by fat fingers since your digits are no longer part of the equation).

The Blind Will See

One market which often leads in innovation is applications for the disabled. Computerized eyeglass technology is currently being used to help people with seriously impaired vision to see. By combining super bright, but tiny OLED screens with computers, headset such as eSight Glasses (see Figure 4) are allowing legally blind people to lead practically normal lives.

Figure 4. Although expensive ($15,000) eSight Glasses are starting to change the world for the visually impaired.

In fact, the technology is pretty cool. Everyone may want their own set since some of the impaired users with eSight Glasses are seeing things which normal sighted people can't. The technology allows the user to zoom in on distant objects. "Using the eSight device, users are able to zoom in on details of objects with 14 times the magnification of normal vision. This allows operators to 'zoom in' on objects across the room, as if they had binoculars."

The eSight Glasses consist of a camera, prism lenses, OLED displays, CPU, battery and other inner workings (see Figure 5). It is quite a bit of bulk, but when the benefits are considered for the legally blind, style and appeal are not an issue.
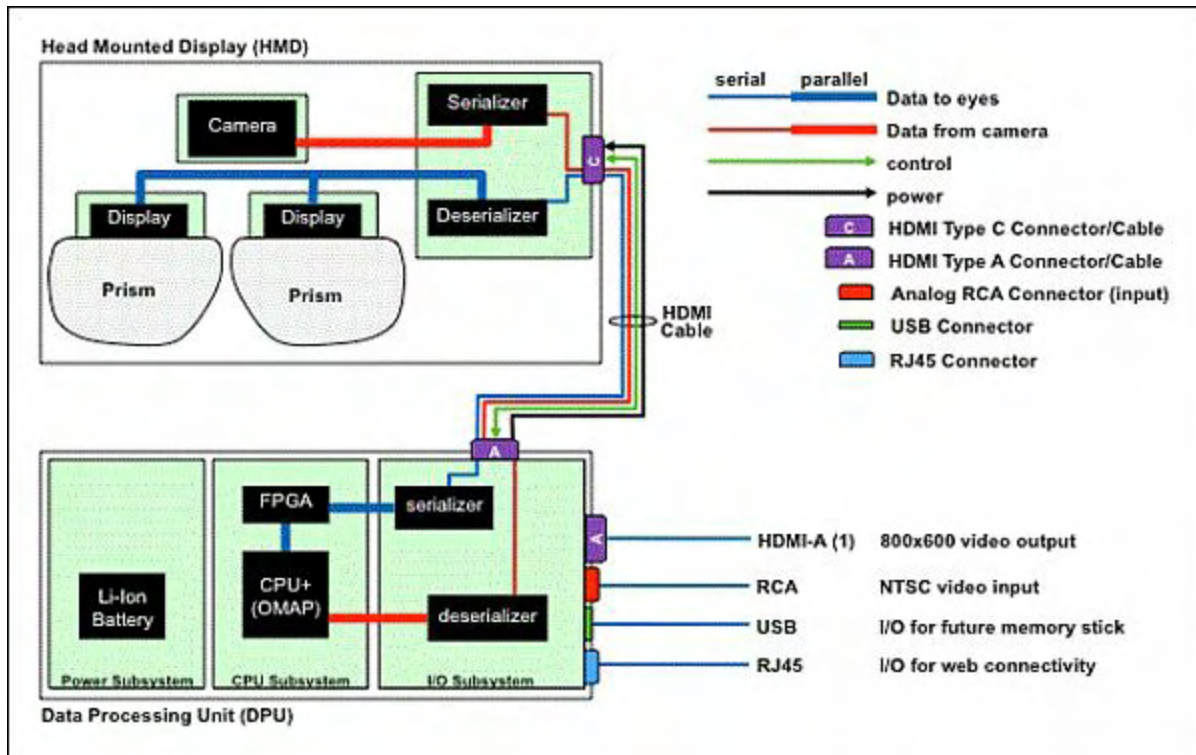
Figure 5. eSight Glasses uses a video camera, a computer and OLED displays to make it possible to see.

The special glasses currently cost $15,000, so the company is involved in fund raising to assist in offering eSight to those who need it. But as the technology improves and the prices drop (they usually do), they will become more commonplace. Even people with normal vision will buy them for their nature walks and bird watching.

There are plenty of heart warming stories about how eSight Glasses have radically changed lives. I expect that in the not too distant future we may see many white canes and guide dogs replaced with wearable computers. However, it's important to remember that these devices are only an aid for people who can see at least partially, They are not a cure for total blindness. But any type of technology that helps those who need it is a worthwhile development and cause.

The eSight Glasses do not perform the same function as Google Glass, but much of the same technology is used in making them. Google Glass is designed to use sight, sound, and voice recognition to exchange data. The eSight Glasses concentrate on vision.

Google Glass is regrouping while others enter the field. Companies such as eSight are taking a

piece of the technology and building solutions. While it's hard to say how its final form will look, there is no doubt that we are on the cusp of no-hands computing.

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:

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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.

Using AutoHotkey to Draw a Straight Line in Windows Paint

"While You May Never Need to Do This, the AutoHotkey Techniques Apply to Many Other Applications" by Jack Dunning

Jack continues investigating using AutoHotkey drawing controls in Windows Paint.

Last week we looked at how Windows Paint (and most other programs) can be controlled with an AutoHotkey script by calling out the software's [ALT activated shortcut keys](). This time a technique for drawing a straight line with the Pencil tool is highlighted.

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It's not necessary to draw straight lines with the Pencil tool. In fact it is almost impossible to do by hand. The Pencil tool is for freehand drawing and not setup for reshaping as are the various shape tools. It's easy to draw a straight line with the Line shape tool, as shown in Figure 1, but that doesn't add much knowledge to our AutoHotkey tool box. The purpose here is to introduce AutoHotkey tricks which can expand our ability to control the Windows Paint tools. By using the freehand Pencil tool, all the usual user-friendly constraints are eliminated.
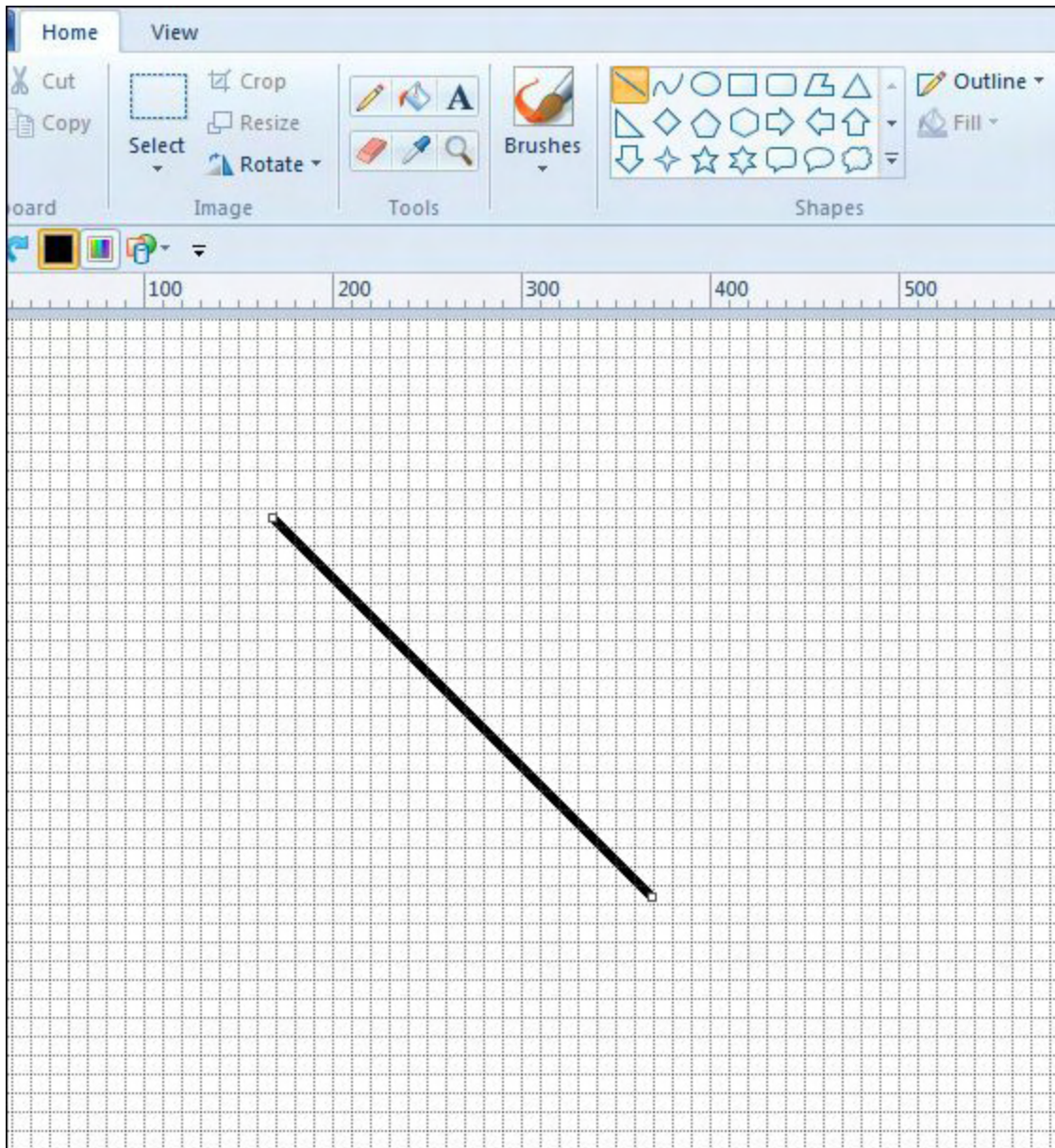
Figure 1. The Line tool is used to draw a straight line.

In this line drawing script, the only change from last week's box drawing script is the use of the HOME key to select the first line shape (the Line tool):

```
SendInput {Alt}hsh
Sleep 100
SendInput {Home}{Enter}
Sleep 200
Click Down 200,300
MouseMove 200, 200, 50, R
Click Up
```

The Line tool always draws a straight line. What kind of challenge is that?

Using the Pencil Tool to Draw a Straight Line

If a modified version of the above script is used to draw a line:

```
SendInput {Alt}hp
Sleep 100
SendInput {Home}{Enter}
Sleep 200
Click Down 200,300
MouseMove 200, 200, 50, R
Click Up
```

the Windows Paint cursor wanders a bit and the line is not straight (see Figure 2). The MouseMove command is used giving AutoHotkey the start and end point, but anywhere in between, the cursor location may randomly vary as long as it is headed for the end point.
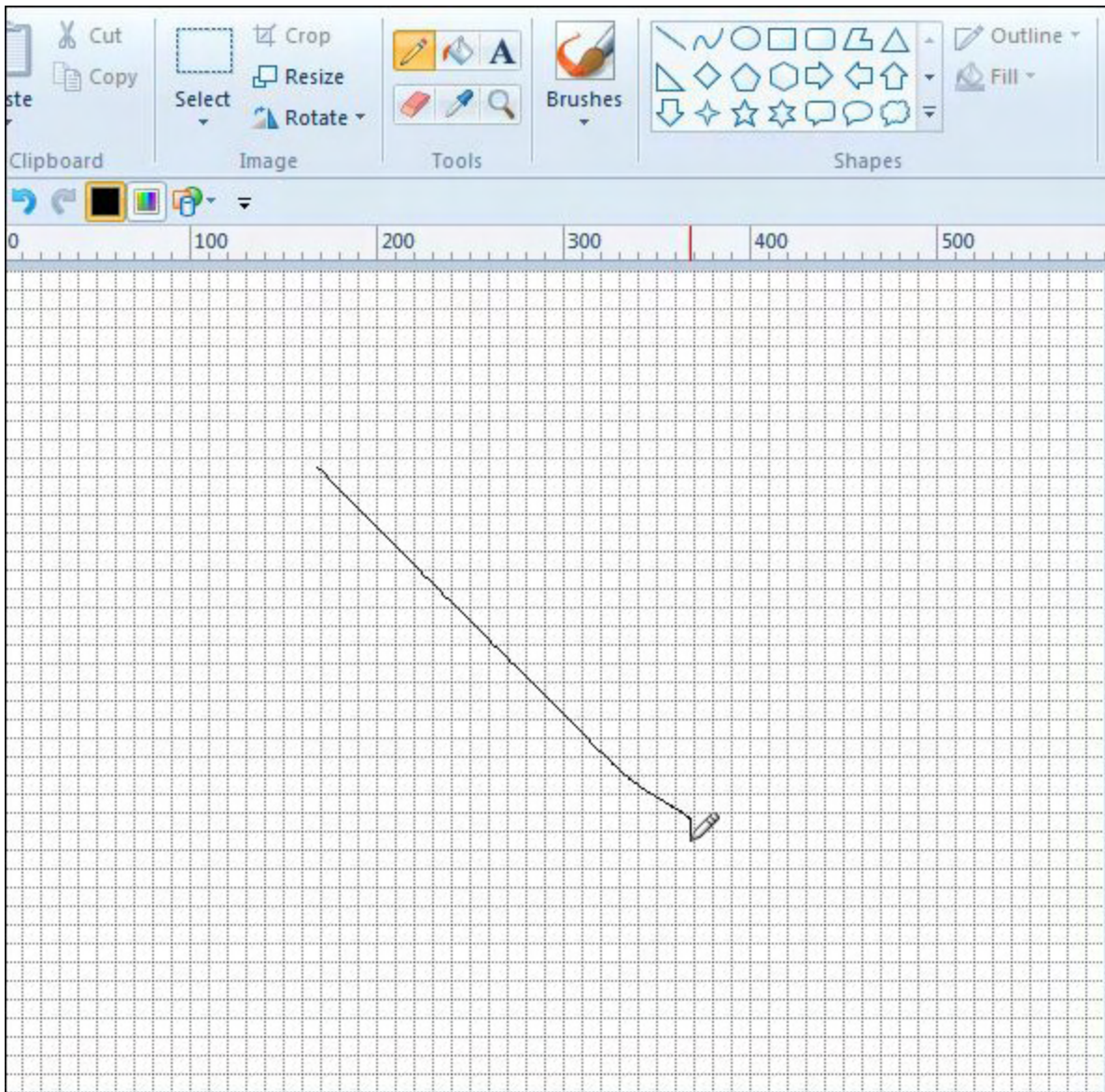
Figure 2. The first AutoHotkey script has a difficult time drawing a straight line with the Pencil tool.

The only solution is to take pixel level control and move the pencil one pixel at a time. That means issuing the *MouseMove* command 200 times. This is done by putting the command in a *Loop*.

Using Loops to Draw Lines

The major advantage to placing the *MouseMove* command inside a [Loop command](#), is that there is absolute control over the cursor location while issuing hundreds (or thousand) of movement commands, yet writing very little code. Without the *Loop*, it would take 200 lines of code to draw the line straight—one for each pixel of movement. With *Loop* the *MouseMove* command is written only once:

```
SendInput {Alt}hp
Sleep 100
SendInput {Home}{Enter}
Sleep 200
Click Down 200,300
Loop, 200
{
  MouseMove 1, 1, 50, R
}
Click Up
```

The *Loop* command increments 200 times (*Loop, 200*) issuing *MouseMove 1, 1, 50, R* (moves only one pixel down and one to the right) on each increment. (The commands that run on each increment of a Loop command are contained between the two curly brackets *{* and *}*.) The result, a dead straight line, is shown in Figure 3.
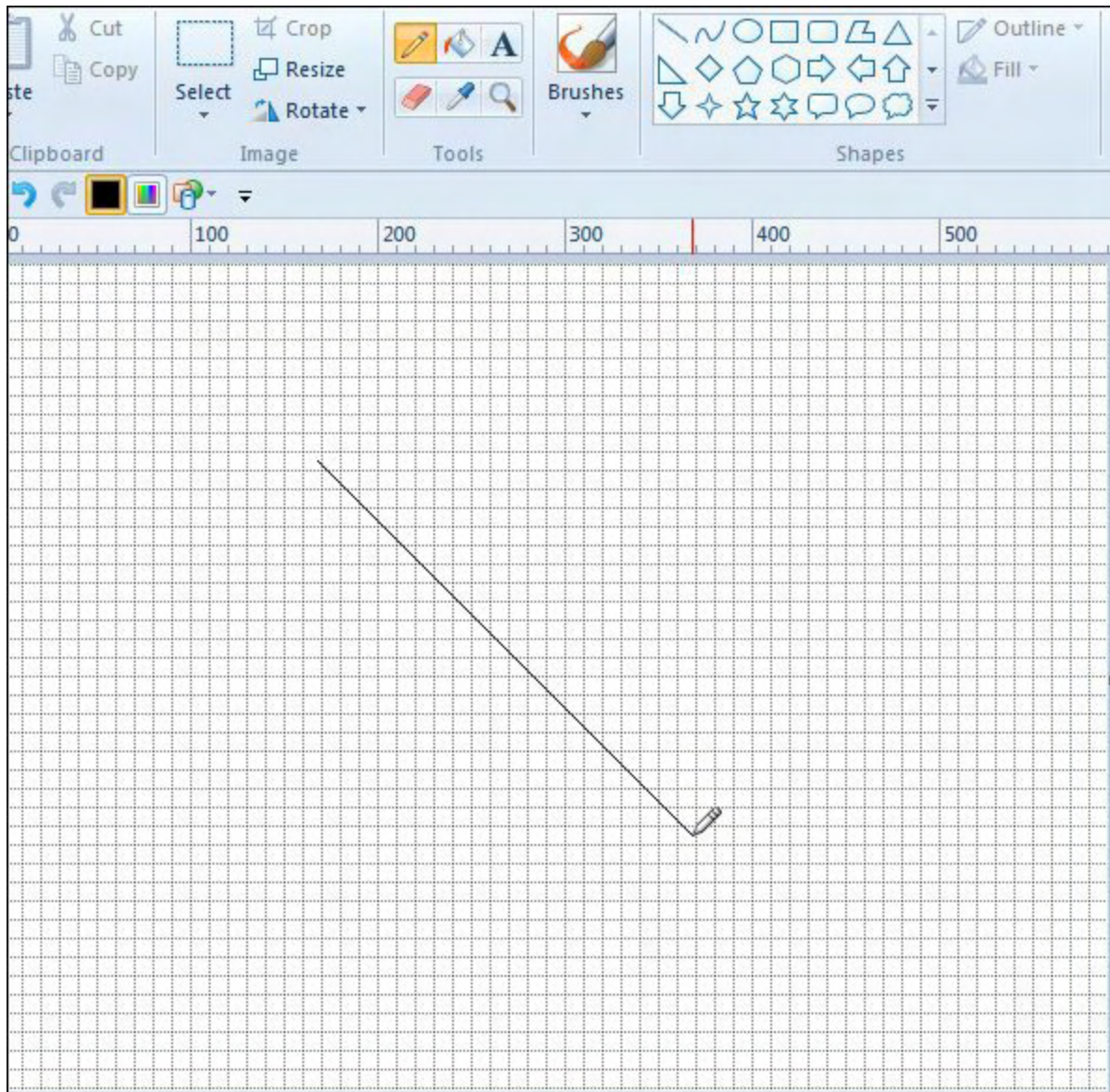
Figure 3. By adding a Loop to the AutoHotkey script the Pencil tool can draw a straight line.

This simple example is the seed for many other much more complicated pencil movements—easily replicated with AutoHotkey, but almost impossible to emulate by hand. The fact that a line can be drawn is no big deal, but, if you have the right formula, you can figure out how to make Paint draw almost any shape with an AutoHotkey script.
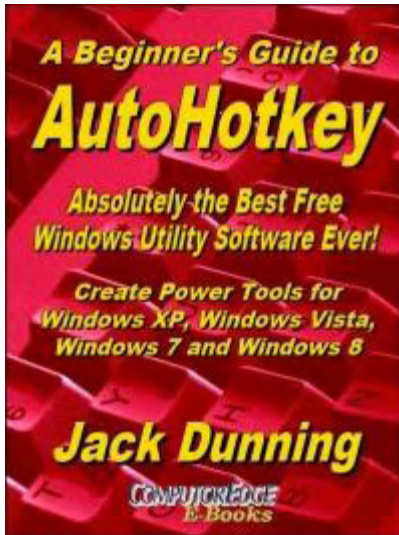
*   *   *

Want a taste of what AutoHotkey can do? Check out these Free AutoHotkey Scripts and Apps

*   *   *

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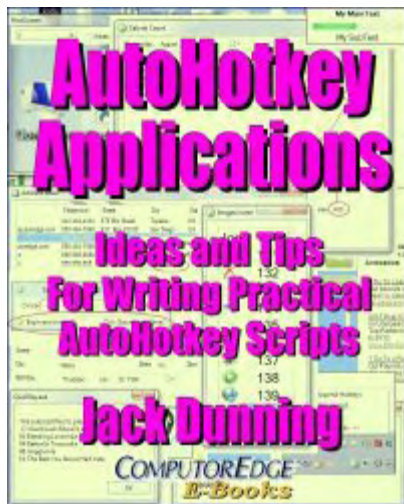
Jack's second AutoHotkey book, *Digging Deeper Into AutoHotkey* (preferred, EPUB format for iPad, Android, and computers; MOBI for Amazon Kindle; and PDF for printing) is comprised of updated, reorganized and indexed columns from *ComputorEdge* is now available. Since the columns were not all written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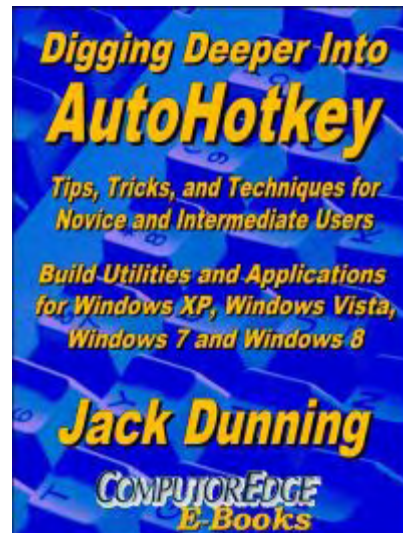
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Jack's third AutoHotkey book *AutoHotkey Applications* (preferred, EPUB format for iPad, Android, and computers; MOBI for Amazon Kindle; and PDF for printing) is an intermediate level book of ideas and applications based primarily on the AutoHotkey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

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

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Wally Wang's Apple Farm

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Back in 1998, Microsoft engineers showed Bill Gates an e-reader prototype that featured a touchscreen interface. One of the engineers involved in the project said that Bill Gates rejected it. "He didn't like the user interface, because it didn't look like Windows," the engineer said. In 2010, Apple would introduce the touchscreen interface of the iPad that redefined the tablet market.

The year 1998 was the time when Bill Gates even said, "What I can't figure out is why he (Steve Jobs) is even trying (to be the CEO of Apple)? He knows he can't win."

Former *Wall Street Journal* writer Yukari Iwatani Kane wrote a book called *Haunted Empire,* explaining how Apple would inevitably decline with the loss of Steve Jobs.

Last week, both Microsoft and Apple announced quarterly earnings where Apple set a corporate record with $18.04 billion in profits. Out of the top ten corporate quarterly records, Apple holds five of them all of which occurred after Steve Jobs' death in 2011.

#	Company	Industry	Country	Year	Fiscal Quarter	Report Date	Earnings (Billion)	USD Inflation to June 2011	USD Real Earnings (Billion)
1	Apple	Consumer electronics	United States	2015	1Q	27 January 2015	$18.04[34]	0%	$18.04
2	Gazprom	Oil and gas	Russia	2011	1Q	30 August 2011	$16.24		$16.24
3	Royal Dutch Shell	Oil and gas	Netherlands UK	2008	2Q	30 June 2008	$15.68	3.16%	$16.18
4	ExxonMobil	Oil and gas	United States	2008	3Q	30 September 2008	$14.8	3.17%	$15.27
5	Apple	Consumer electronics	United States	2014	1Q	27 January 2014	$13.10[35]	0%	$13.10
6	Apple	Consumer electronics	United States	2013	1Q	23 January 2013	$13.08[36]	0%	$13.08
7	Apple	Consumer electronics	United States	2012	1Q	24 January 2012	$13.06	0%	$13.06
8	ExxonMobil	Oil and gas	United States	2007	4Q	31 December 2007	$11.66	7.47%	$12.53
9	Apple	Consumer electronics	United States	2012	2Q	24 April 2012	$11.6	0%	$11.6
10	ExxonMobil	Oil and gas	United States	2005	4Q	31 December 2005	$10.71	14.7%	$12.28

Figure 1. Apple currently holds the record for the most quarterly profits in corporate history.

Apple is currently worth $693.41 billion dollars, which is double Microsoft's market value of $344.64 billion. The iPhone business alone is worth more than all of Microsoft's products combined.

In the meantime, Microsoft announced declining revenue from Windows. Now that Microsoft plans to give Windows 10 away for free, you can expect their revenue from Windows to decline even faster. After alienating so many people with Windows 8, Microsoft has to give Windows 10 away for free to get more people to use it.

Figure 2. Contrary to Bill Gates, not everyone loves Windows.

In the old days, Microsoft raked in millions selling Windows licenses, Office software, and programming tools for Windows. Strip away Windows revenue from the consumer market and that's a chunk of Microsoft's revenue right there. In the old days, corporations bought the latest version of Windows so they could run the latest version of Office. Nowadays, corporations don't upgrade as often (think Windows XP) and they don't always need the latest version of Office either. That means declining revenue from Office as well.

With fewer people relying on Windows and Office, there's also less of a reason to buy programming tools for Windows, so there goes Microsoft's third revenue stream. Microsoft is racing to shift customers to their cloud services before their Windows/Office/tools divisions decline much further.

Can Microsoft succeed? Probably, but it's unlikely that Microsoft will ever dominate the computer market like they did in the past. When you see Steve Ballmer [laughing at the iPhone](#) and making claims like "There's no chance that the iPhone is going to get any significant market share. No chance," you can understand why Microsoft has fallen so quickly. Perhaps Steve Ballmer should have listened to Bill Gates when he said, "Success is a lousy teacher. It seduces smart people into thinking they can't lose."

LiveCode App Programming Course

Most compiler companies release their products on the market and expect users to magically know how to use their tools. For years, [LiveCode](#) tried that approach by offering a

HyperCard-like programming tool that could create Windows, Linux, OS X, iOS, and Android programs.

To encourage more people to try and use LiveCode, the company released their program free of charge. The only catch is that if you want to compile programs to sell to others, you'll need to buy a $299 annual license.

To further encourage people to use LiveCode, the company recently started an online programming course showing how to create common iOS apps using LiveCode. By following this course (included in your purchase of LiveCode), you can learn how to create iOS apps and use some of LiveCode's obscure but powerful features. After learning to create fully functional apps, you'll be far more likely to use your knowledge to create your own iOS apps using LiveCode.

To see an example, download this simple calculator app created in LiveCode. To show the simplicity of LiveCode, creating a four-function calculator took less than 100 lines of code.
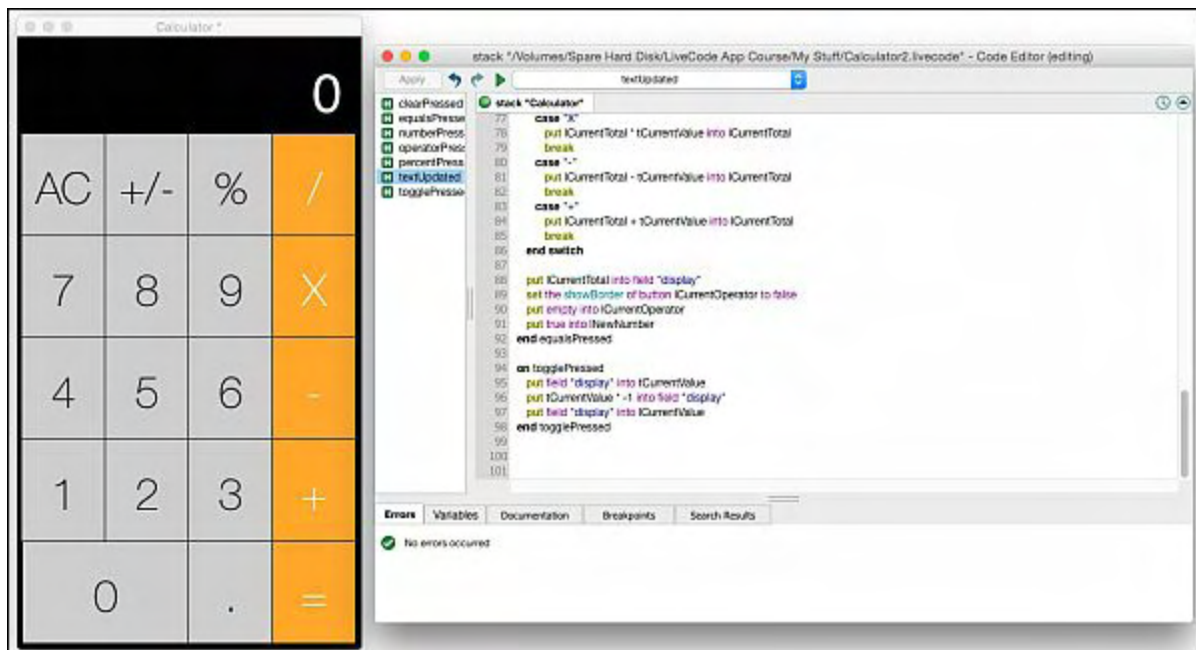
Figure 3. LiveCode can create a calculator in less than 100 lines of code.

Try creating a calculator in your favorite language and see how much code you need to write. Once you see how you can create programs faster and easier with less coding using LiveCode, you can better compare LiveCode to other programming tools.

If you want to see what other people have created using LiveCode, download the free graphic novel, *Midnight Rises*. By giving the first chapter away for free, the company hopes to entice readers to purchase the second and third chapters along with additional bonus art. To learn how the designers created their graphic novel using LiveCode, read this interview.
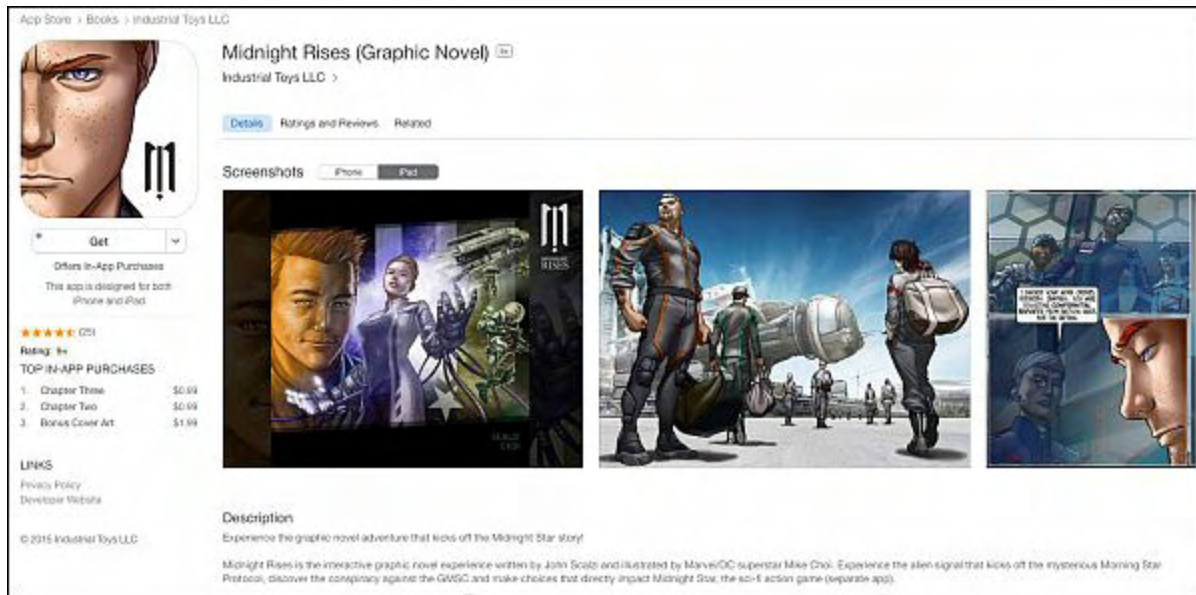
Figure 4. LiveCode makes it easy to create interactive graphic novels.

After seeing how LiveCode works, you might be tempted to see what you can create without wasting time learning a more complicated programming language that makes doing the simplest tasks far more difficult. In general, if you want to create a traditional iOS app that uses standard iOS controls, you might be better off learning Swift and using Xcode so your app looks and works like a standard iOS app. However if you want to create an app with a non-standard iOS interface like a graphic novel, LiveCode might be the better option.

Competing in the Commodity Market

People often apply lessons of the past to the present and that's the extent of their predictive abilities. After Windows dominated the PC market, everyone thought Android would dominate the smartphone and tablet market in both market share and profitability.

Android succeeded in dominating the market share, but they fall woefully behind when it comes to profitability. Samsung reportedly sold as many phones as Apple in the last quarter, yet Apple made far more in profits because the average price of an iPhone is far higher than the average price of a Samsung phone that includes both high-end and low-end feature phones.

The problem with Android (and Windows) is that it creates a commodity market. As long as everyone had to buy a Windows PC, Windows PC manufacturers could all thrive. The moment valid choices appeared to choose anything but Windows, you can see how well PC manufacturers are surviving with razor thin margins when their only marketing advantage is price.

That's the same problem facing Android smartphone and tablet manufacturers. Why buy an Android device from Samsung when you can easily buy one from LG or Xiaomi instead?

Since all manufacturers use the same basic parts and software, there's little reason to stay loyal to any particular Android device manufacturer.

Even worse for Android manufacturers is that they can only make their money selling devices, but to compete against other Android manufacturers, they have to lower their prices. In the meantime, Apple has no competition because if you want an iPhone, you have to buy it from Apple.

Once you buy an iPhone, chances are good you'll buy apps, music, and maybe even e-books as well, which earns Apple more money. Use Apple Pay on your iPhone and Apple gets a cut of that money too. Apple can make money both selling iOS devices and selling digital products to those same devices. Android manufacturers can only make money selling Android devices but don't make any money when Android users buy music or apps.

That's why Samsung tried to create their own operating system called Tizen and Microsoft invested in a company developing an Android clone called [Cyanogen](). The goal of both Tizen and Cyanogen is to free themselves from the restrictions of Google. The problem is all they're doing is creating another commodity operating system that duplicates the problems of Android by turning every manufacturer into another commodity dealer selling the same devices.

To avoid this trap, Microsoft tried to create Windows Phone as a proprietary operating system where they could make money selling apps. The problem is that Windows Phone isn't popular because there's little reason for iOS or Android users to switch.

There will always be a larger market for cheap phones so manufacturers can still thrive if they focus on the low-end and make up their profits in volume. In the meantime, Apple will sell the same amount of (or even fewer) iPhones yet still take home the bulk of the profits.

As Samsung and other Android device manufacturers have learned, it's hard to make money when you sell what everyone else can sell too. The way to make money isn't just to sell something that nobody else offers, but to sell something that everyone else wants. While Apple focuses on improving the iPhone for its customers, Samsung and every other Android device manufacturer has to find a way to differentiate themselves from their competitors using an operating system that everyone else can use. Expect everyone in the future to make less profits in the smartphone market, except for Apple.

YouTube Dumps Flash for HTML5

For years, YouTube relied on Flash to provide streaming video. Now YouTube announced that they're [dumping Flash]() in favor of HTML5.

Flash is already a dying technology since Adobe stopped trying to get Flash to work properly on mobile devices and mobile computers are fast becoming the most common way people interact with the Internet. In many parts of the world, ordinary computers are too expensive

and bulky to use so these people rely exclusively on mobile phones to communicate with the rest of the world. That means less reliance on Flash.

The slow demise of Flash also helped kill the future for Microsoft's Silverlight. The problem with Silverlight was that it basically duplicated Flash. Once Flash's future withered, so did Silverlight's future. That should show the folly of trying to copy an existing leader and hoping to take over the market when it's far easier and less risky to become a leader in your own market.

Remember when America Online was the online leader? That's when Microsoft tried to copy it by creating their own online service called the Microsoft Network. Then the Internet appeared and wiped out the online service market.

Remember when Palm Pilots were popular? That's when Microsoft tried to copy it with their Windows CE operating system. Then mobile phones morphed into personal digital assistants (PDAs) so there was no reason to buy separate PDAs any more.

Remember when Turbo Pascal was popular? That's when Microsoft tried to copy it with their Quick Pascal compiler. Then when the programming world abandoned Pascal, nobody wanted Pascal compilers any more.

If you want to fail, keep smashing your head against a brick wall by directly challenging the leader in any market. Then you'll not only have to struggle against the leader, but you'll also tie yourself to the whims of the market that props up that leader. The moment that market changes, it will take down the leader and any copycats at the same time.

With YouTube abandoning Flash, expect Flash to linger until it gradually fades into irrelevance like floppy disks and daisy-wheel printers. Flash still can be useful, but its days of dominating the Internet market is long over.

Outlook as the Best iOS Mail Client?

Most people are satisfied with the Mail app that comes with every iOS device. However many others find this Mail app too simple and limited. If you're the type who likes to look at their e-mail, glance at a calendar, and check for appointments, then you might want to download the free Outlook for iOS app.

Figure 5. Outlook for iOS offers the integrated features of Outlook on an iPhone/iPad.

Many business people depend on Outlook so now they can use the familiar features of Outlook on their iPhone or iPad. Now that Microsoft has finally realized they're a software company, they can start releasing software for other platforms. The more dependent people get on Microsoft software, the more likely they'll continue using other Microsoft software for their servers and desktops.

The whole world doesn't have to use Windows for Microsoft to succeed. As long as Microsoft can embrace the new world of mobile and offer the best software possible on all the popular platforms, they can still remain relevant in the rapidly growing mobile market.

Programming Around the World

In most other countries, kids learn programming as part of their curriculum like learning math and reading. Unfortunately in the United States, programming still seems more like an exotic elective than a necessary skill that everyone should understand. While the United States pours more money into schools and getting little to show for it, other nations spend far less and often

get far better results.

In Saudi Arabia, high school students are not only learning programming, but they're focusing exclusively on mobile computing since they recognize that's the future. To help train mobile developers, Saudi Arabian students are using a unique programming tool called AppStudio, which lets you write iOS and Android apps using either JavaScript or BASIC.

In Gracemount High School in Edinburgh, Scotland, high school students are using LiveCode, which can create Windows, Linux, OS X, iOS, and Android apps. Best of all, LiveCode is free to use so it doesn't cost schools anything.

Allan Drain, Curricular Leader of Technologies, said, "I've been teaching programming for over 25 years, and struggling with a variety of different languages. Finally when LiveCode came along, we had a language that was fun, intuitive, and really hit all the levels that we teach in the school."

Singapore plans to introduce programming lessons in public schools to boost the economy. Poland relies on online courses to teach C and Java programming to their students while also teaching BASIC programming using Xojo. Iceland wants to teach programming using psychology. Rakel Sölvadóttir runs Skema Education and says, "We want every student to leave happy every day. If they don't, we've done something wrong."

Back in the United States, less than 2 percent of students even study computer programming. In 41 states, computer science doesn't even count toward high school graduation requirements. While the rest of the world teaches their kids how to program, American students are saddled with places like Little Rock, Arkansas where the state had to enforce a dress code that required teachers to wear underwear. Anyone want to guess which nation's children will be better prepared for the future and which nation's children will be the future manual labor workers of tomorrow?

<p style="text-align:center">*   *   *</p>

In the upper right of the screen, you can see all sorts of icons such as the volume or time. In case you want to remove those icons from the menu bar, hold down the Command key and drag those icons off the menu bar. Then release the mouse button to complete the removal.

To put icons back on the menu bar, click the Apple menu, choose System Preferences, and then click on the icon representing an item such as Sound or Date & Time. Then select the check box that puts that icon back on the menu bar again.

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

Math for the Zombie Apocalypse

How to Write a Great Script with Final Draft 9

Making a Scene: The Science of Scene Structure.

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.

Editor's Letters: Tips and Thoughts from Readers

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

"OSX Review," "Password Management," "System File Checker," "Those "Useless" Cursor Keys"

OSX Review

[Regarding Barry Fass-Holmes's January 16 <u>article</u>, "OS X Yosemite's Top Features of Interest for Windows Users":]

I couldn't agree more. I switched over to the Mac two years ago and should have done it earlier. Jobs did his best to make the Mac user-friendly. Next time you are in a coffee shop, count the number of PCs.

-D Stang, Southern CA

Password Management

[Regarding the January 23 <u>Digital Dave column</u>:]

Dave's password rules are useful, but we are sometimes constrained by government and bank Web sites with lists of overly complex password rules that dictate what must be included i.e. special characters, spaces, etc. Also obvious passwords are already taken forcing us to be creative.

-James Taylor, San Diego

Dave,

Great tips on password management. Here are some other methods.

Keep a master list of passwords in an encrypted file on each device you use. You can use the encryption feature in MS Word, or Libre Office to create this file. Or use a public key encryption program like PGP or OpenPGP.

Another method for creating and remembering passwords in using the first letter of some memorable sentence, replacing some letters with numbers, capitals, or punctuation.

You won't even have to know what your password is, if you type a pattern on the keyboard. I'd still keep it in the master list.

I wouldn't store any of this on an iPhone or Android device. With their data mining capabilities, might as well post it on Facebook.

-Dennis, San Diego

System File Checker

[Regarding the January 16 Digital Dave column:]

Regarding the System File Checker, I saw this advice in another tech newsletter and ran what was recommended. I had no problems, just thought it would be good to see if any repairs were needed. As advised, I ran *sfc.exe* and no problems were found, but then after reboot I got the "build 7601 error", not a genuine etc.! I saw online later that this is a common problem.

Thank goodness I had a restore point just a couple of days prior.

-Sandy, San Diego

Those "Useless" Cursor Keys

[Regarding the January 16 Wally Wang's Apple Farm column:]

Pardon Mr. Wang, but blind people *need* those keys to navigate the desktop. We cannot *see* to use a mouse. This is true for both Windows, with a screen reader, and OS x, with Voice Over. Also, any people find a standard 10 key pad much faster than trying to use the number keys as the top, just below the F keys.

-Paula, Fresno

My comment wasn't that cursor keys and a numeric keypad are useless, but that many PC keyboards include a separate cursor key pad (shaped like an upside-down T) and a numeric keypad that doubles up as a cursor key pad if you press the Num Lock key. Since few people use the numeric keypad as a cursor key pad any more, that second cursor key pad on the numeric key pad is useless.

-Wally Wang

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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Table of Contents