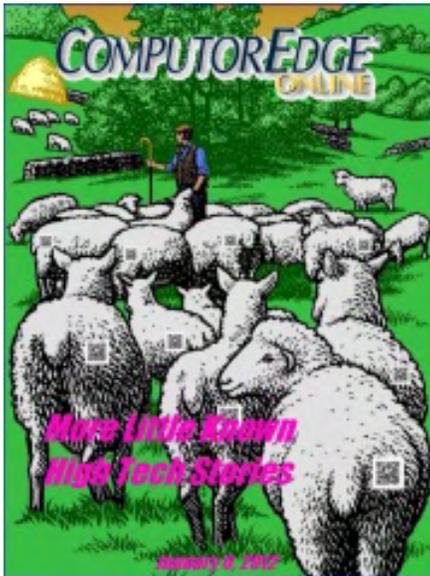


ComputerEdge™ Online — 01/06/12



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 Food From Fiction, Texting
 Store Discounts and QR
 Codes On Grave Markers

More little known high tech stories,
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DEPARTMENTS:

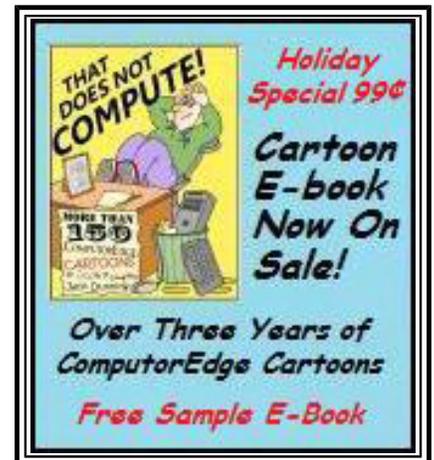
[Editor's Letters: Tips and Thoughts from Readers](#) by

ComputerEdge Staff

Computer and Internet tips, plus comments on the articles and columns.
"OpenOffice.org Talk," "Full Disk Drive," "Poor Streaming Video Quality"



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Digital Dave

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

Age of Empires II Problem; Legitimate Web Sites?; Windows 7 Frustration and More about E-books.

Dear Digital Dave,

I have a small problem. I don't play many games on my laptop, but I do still love "Age of Empires II." I recently upgraded to Windows 7 and it seems that some of the graphics aren't as good as it was with Windows XP. My Laptop is new, could it be the graphics card isn't very good, or is it that Windows 7 doesn't support the older games?

If you can make any suggestions I would greatly appreciate your help.

Thank you,

Dan Bongiorno

Dear Dan,

There is nothing wrong with your new laptop or its graphic card. The problem is as you guessed, Windows 7 has some problems with the older "Age of Empires II." However, you should be able to get it running.

The first thing that I would try is running the program in Compatibility Mode. Open the programs Properties window by right-clicking on the programs icon and selecting Properties. You should see a window similar to Figure 1. Select the Compatibility tab and enable the Windows XP (Service Pack 3) mode. Also, check "Run this program as an administrator." This will set the program to run with Windows XP setting.

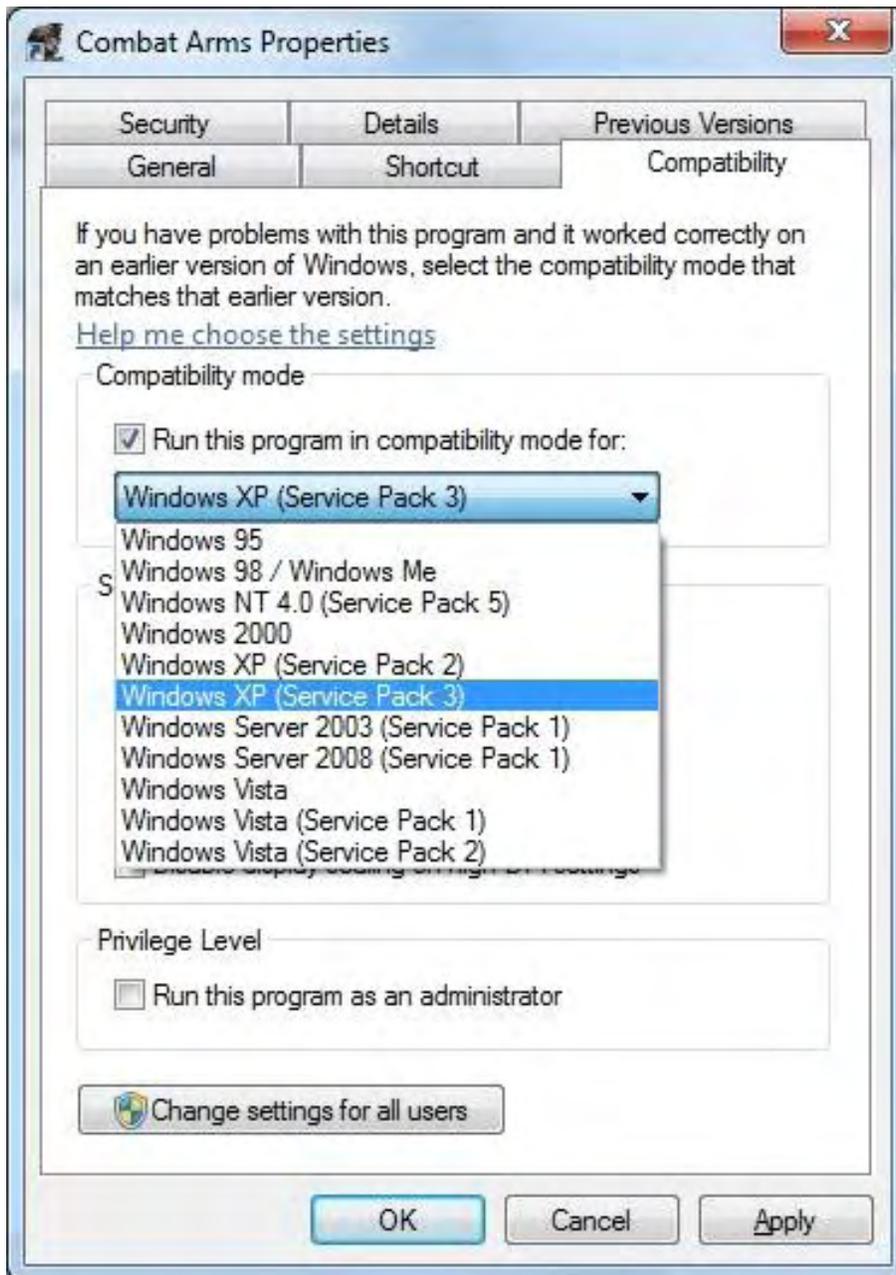


Figure 1. The Properties window for a legacy game with the Compatibility tab selected.

This first method may or may not work. The problem is that either the Windows 7 version of Explorer is causing a conflict or that the current version of ActiveX is not compatible with the game. You could try upgrading to Windows 7 Professional which includes Windows XP Compatibility Mode. Then Windows XP will run as a virtual machine in a separate window. However, there is a cost to the upgrade and I still can't guarantee that it will run since I don't have the program to test it.

The next steps to take I found in a number of places and it seemed to work for many people:

1. Open Task Manager (CTRL+SHIFT+ESC simultaneously), select the Processes tab and end explorer.exe, then ALT+TAB back into Age of Empires.

Note: The taskbar will disappear along with any open folders.

2. To restart Explorer, open the Task Manager again in the Applications tab. Hit new task and type "explorer" in the box. The colors change due to the Windows Aero theme.

Additionally, you can make a batch file to automatically close Windows Explorer, launch the game, and restart Explorer. Give it a name such as AgeFix.bat and save it in the game folder. Double click on the new batch file icon whenever you want to start the game.

File contents:

```
taskkill /F /IM Explorer.exe  
age2_x1.exe  
Start explorer.exe
```

If it is the ActiveX problem you are encountering, the fix is a little more involved. I found this set of methods (www.mydigitallife.info/workaround-to-play-starcraft-age-of-empires-and-diablo-in-windows-7-or-vista-fix-color-display-issues/) which will give you more things to try for a few different older games.

Digital Dave

Dear Digital Dave,

When shopping online, how can you determine the legitimacy of a Web site? I want to know:

Is "evaluatesoftware.com" a legitimate Web site or not?"

Thanks.

I'm just a young 81 year-old still curious about our new technological lifestyles.

*Julianna
Alpine, CA*

Dear Julianna,

Determining the legitimacy of a Web site is a very serious problem. Anyone from anywhere can put up a site for any purpose. If you are planning to make any Internet purchases, it is best to stick with known entities.

This is one reason why Amazon is so popular. They have a strong reputation and try to keep their customers happy. For computer parts and software, Newegg (www.newegg.com/) has an excellent reputation and is competitive.

There are many other reputable businesses, but the problem is identifying them. Sometimes I will find companies who sell through Amazon. Customers rate their experience on Amazon with that business. If they have a good rating I will go directly to the company's Web site. Often they will have other products or deals which are not available through their Amazon sales.

If I'm looking at a Web site such as the one you mention, I will Google terms such as "evaluatesoftware problems," "evaluatesoftware reviews," or "evaluatesoftware complaints." Ignore the "resellerratings.com" listings at the top of the page. They appear to be scam reviews. They all give the max five star ratings. No one gets all perfect reviews.

I found an Amazon listing, but all of the products had been pulled by Amazon and there were many complaints.

Probably the best information came from SiteJabber (<http://www.sitejabber.com/reviews/www.evaluatesoftware.com>). I'm sure that there are other sites which review Web business, but watch out for more scam review sites such as resellerratings.com. It is well worth the time it takes to verify any business on the Internet.

Digital Dave

Dear Digital Dave,

I have become very frustrated with my conversion of XP and Vista to Windows 7. I need an uncomplicated way to get these answers as I am "set in my old ways" and get very upset when none of them work with Windows 7.

Thanks,

*Mugs Satran
Columbus, NM*

Dear Mugs,

I certainly understand your frustration. Microsoft has moved or changed just enough things in Windows 7 to make the learning curve steeper than it should be. Plus, although all the information is available on the Web, it can be difficult to sift through it.

Microsoft has a series of video (windows.microsoft.com/en-US/windows7/help/getting-started) which should help you to better understand the inner workings of Windows 7. (There is also a printable guide in PDF format on the same page. Click the PDF link, then it should download. After saving, you can open the guide in the free Adobe reader. Print for later reference, if you like.) Each video is only four to six minutes, but there are also links to other specific Windows 7 topics. Perhaps reviewing this Microsoft information will be all that you will need to get comfortable with Windows 7.

I would also recommend finding a good tutorial on Windows 7, possibly a book in the Computers section of a bookstore. (It is getting harder to find a bookstore these days.) If you can read through the differences between Windows XP/Vista and Windows 7, then it will start to make sense. If you are thrown into Windows 7 with no orientation, it often seems unworkable.

Another possibility is Jack Dunning has started compiling his *ComputerEdge* Windows Tips and Tricks column into e-books available at *ComputerEdge E-Books* (www.computoredgebooks.com/Windows-Tips-and-Tricks_c4.htm). I've noted that he has started with the Windows 7 Taskbar and he tells me the new Windows 7 Explorer e-book will be out next week. These are the two

parts of Windows 7 plus the Start Menu that we use the most, but also have changed the most—especially since Windows XP. While I think that there is a lot of good information in Jack's columns and e-books, for people who are new to e-books another layer of learning may be added.

E-books are digital formats of books which can only be read in e-book readers. They easily adapt to the e-readers and operate very much in the same way as a printed book—without the paper. The text flows into the reader with adjustable font type and size for comfortable reading. They support digital bookmarks for saving your place (or making notes) and generally you can quickly jump to the Table of Contents and other chapters.

There are two types of e-book readers: devices and computer software. The e-book reading devices include Amazon Kindle, Barnes and Noble NOOK, Kobo, Apple iPad, smartphones and a number of other small handheld gadgets. Most of the makers of the devices also support free versions of e-book reading software which will run on your computer. Therefore even if you don't own an e-book reading device or a tablet computer, you can still read e-books on your computer.

Before you buy any of Jack's e-books (or anyone else's) be sure that you are comfortable with reading e-books. You can experiment with e-books by checking out the links under "Download *ComputerEdge* as an E-book" at the top of this page. Free e-books of the current *ComputerEdge* issue are available in both EPUB format for iPad, NOOK, Kobo, etc. and MOBI format for Amazon Kindle. You can get the free e-book reading apps for your computer or tablet by going directly to the device or software maker. (There are links in the article "How to Download and Read Free E-Books" in the section "Reading E-books on Your Computer" found in the second half of the article. Plus that article will tell you how load the e-books into the software and/or an e-reading device.)

One the advantages of using an e-book reading device such as a Kindle or iPad is that you can keep the Windows 7 e-book open next to you on the table while working with your computer. This saves jumping back and forth to open windows on the same computer.

Digital Dave

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Solar Suitcases, Mobile Cloud-Gaming, and Wearable Projection Systems

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Food From Fiction—Eel Pie Anyone?

Literary foodie fans have launched a new idea: making food dishes (online.wsj.com/article/SB10001424052970203935604577064981671021446.html) based on descriptions in popular books. Eel pie, nettle soup and grilled snake probably wouldn't go over well at the next Potluck, but for fans of the books in which those dishes were described, "The food enables you to connect on a deeper level with the books," according to one fan of George R.R. Martin's fantasy series, *A Song of Ice and Fire*.



Fantasy food has also become a popular niche for publishers. *The Unofficial Harry Potter Cookbook*, which came out last year, has sold more than 150,000 copies. And the *Unofficial Hunger Games Cookbook* is one of three cookbooks based on that science fiction series. There are even Web sites devoted to fantasy food, such as Fictional Food (fictionalfood.net).



"I've found a couple of lovely recipes on my iPad. Would you prefer rat pie or eye-of-newt tarts?"

And for gaming fans who can't get enough of Angry Birds dropping eggs on snorting pigs, now Rovio (its mobile app developer) is going to publish an Angry Birds cookbook (paidcontent.org/article/419-angry-birds-is-prepping-its-first-book-a-cookbook-about-eggs/). It's

going to be a cookbook exclusively of egg recipes, and will be released in both print and as an app. Rovio has already made substantial money on side products and YouTube videos of their signature game, and now consider themselves as a "major entertainment brand" that grew out of a mobile gaming company.

High Tech on the March!

According to the Chicago Sun Times, the technology industry is one of the fastest growing career fields, fueling a demand for tech professionals (specialsections.suntimes.com/education/8306187-555/tech-careers-boom-as-demand-increases.html). And as all kinds of businesses continue to integrate technology into their operations, tomorrow's computer technology careers will be increasingly outside the strictly computer or technology fields. Keturah Mills, of the Everest University in Largo, Florida, reports that "Employers are increasingly telling us that ... they want employees who use computer know-how to solve problems (and) have hands on experience in a range of real world applications."

A Chicago consulting firm, Kairos Consulting Worldwide, saves taxpayers millions (www.suntimes.com/technology/8066110-478/chicago-consulting-firm-helps-government-save-money.html) by cutting costs and streamlining operations for the U.S. Navy and U.S. Department of Energy. Minority owned Kairos has doubled its technology centric work force. It saved the Navy \$23 million over five years "by squeezing costs out of moving logistics and supply chain work to the Defense Logistics Agency."

Apple and Microsoft's Last Appearance

Next month's CES (Consumer Electronics Show), the largest trade show in the Americas, is already generating buzz ahead of its Jan. 9-12 show in Las Vegas. Microsoft, like Apple, has announced that this January event will be its last (www.siliconvalley.com/personal-technology/ci_19593241). Microsoft will use the event to "connect with customers," but won't have a booth. Both Apple and Microsoft want to put on their own events, so they can decide when a new product is deemed ready to be presented to the public.

Quick Response Codes—Rock Bands to Grave Markers



Developed in Japan in 1994 to track vehicles during the manufacturing process, Quick Response (QR) codes (wikipedia.org/wiki/QR_code) are a type of matrix barcode that are designed to allow its contents to be decoded at high speed. While the U.S. was slower than other countries to adopt QR codes, they are now appearing on everything from grave markers to real estate listings (see below). There are multiple downloadable QR Code Reader



apps (www.cellphone-barcode.com/qr-code-readers) for your smartphone which are downloadable for free or minimal cost (\$.99).

USA Today reported on a cemetery that affixes a small QR code to grave markers (www.usatoday.com/tech/news/2011-07-19-qr-codes-smartphones_n.htm). Visitors can scan the QR code with their smartphones, and be taken to a Web site that includes the obituary, photo gallery and loving remembrance of the deceased. Based in Seattle, Quiring Monuments (quiringmonuments.com) has been marketing their "code-adorned living headstones" for only a few months, and will even add a QR code to existing monuments for \$65.

Other examples of companies or organizations using QR codes include a Colorado rock band that hands out T-shirts with QR codes, which direct fans to a site with the group's free music downloads. And a Baptist Church in Louisiana is using QR codes in its bulletins and posters to encourage sign-ups for special family and youth programs. Other applications include missing-children posters with QR codes, for people to share crucial information with the National Center for Missing and Exploited Children.

Attention Mall Shoppers!

A couple Atlanta shopping centers (www.ajc.com/business/marietta-suwanee-shopping-centers-1254951.html) are experimenting with using technology to bring customers into their stores. Shoppers can opt-in to texted discounts through a technology called a "geo-fence." When shoppers enter a predetermined virtual space around the shopping centers, they will be texted discounts at certain stores. Consumers can activate the technology by going to ValuText (valutext.shopalerts.com/).



Although full body-scanners remain controversial and time consuming at airports, engineers at the Pacific Northwest National Laboratory (www.pnl.gov) in Richland, Washington, have designed a step-into circular scanner (seattletimes.nwsourc.com/html/localnews/2016994872_scanners12.html) that uses no radiation. Best of all, it has commercial applications beyond airport security. The "Me-Ality Size Matching Station" made by Unique Solutions of Nova Scotia (www.uniqueltd.com/news) has been set up in malls in the U.S. as "body scanning

kiosks."

Shoppers can step into one and remain still for 10 seconds, while a vertical scanning wand goes to work, with 196 small antennas sending and receiving low-power radio signals that bounce harmlessly off the skin. The shoppers emerge with their three-dimensional measurements instantly matched to clothing information in that store's database. Then "out pop lists that can be sorted by brand, price, style and retailer." Shoppers can then head to the racks to pick out potential purchases they know will fit. Besides future use as safer, faster airport scanners, interest has also been piqued to use the scanners in health clubs to monitor members' weight loss and muscle growth, and even in pest-control businesses to see insects through walls.

Live-Streaming the Super Bowl to Smartphones

I recently wrote how mobile football apps are connecting fans and even simplifying the ordering of stadium food. Now comes word that, for the first time, NBC and the NFL (National Football League) will live-stream wild-card playoff games (nbcsports.msnbc.com/id/45737082/ns/sports-nfl/), the Super Bowl and Pro Bowl to smartphones. The games can be seen at NBCSports.com, and NFL.com through SNF Extra "which features an HD broadcast, DVR-style controls, additional camera angles, in-game highlights, live statistics and interactive elements."

New Spin on Buying/Selling Real Estate

For people wanting to research big ticket items, some real estate companies are now adding QR codes (www.usatoday.com/tech/products/2011-06-30-home-seller-apps_n.htm) to "For Sale" signs and flyers. Potential buyers can scan the code with their smartphones, and be taken directly to a Web site with photos and details, and possibly a video tour. (Coldwell Banker has encouraged its agents to videotape home tours, and even has its own channel on YouTube with 70,000 home tour videos.)

There are also mobile real estate apps for the iPhone, iPad and Android. Trulia (www.trulia.com) lists homes for sale in your area, upcoming Open Houses and even foreclosures. While Zillow (www.zillow.com) offers a free downloadable app "with detailed home data, including those for sale and rent, updated mortgage rates, and calculators."

"Solar Suitcase" and Other Medical Tech Innovations

A new Global Center for Medical Innovation (devices.net) is being built in Atlanta, Georgia and is partnered with Georgia Tech and the Georgia Research Alliance, among others. The idea (www.ajc.com/business/new-center-helps-bring-1068812.html) is "to speed up the commercialization of leading-edge medical devices and technology." Previously, ideas for new inventions from Georgia's universities and medical practices ended up developed in other states, or couldn't be developed at all since there were no local resources to build and test prototypes.

So this new Atlanta center will be a valuable resource for developing and testing medical prototypes, and "helping the developers connect with investors or companies interested in their gadgets." Slated to open next year (2012), the initial focus will be on cardiology, orthopedics and pediatrics.

In 2008, Dr. Lara Stachel arrived at the obstetrics ward of a state hospital in Nigeria. She was determined to figure out why so many Nigerian women were dying in childbirth (seattletimes.nwsourc.com/html/nationworld/2016552217_solarsuitcase20.html). What she discovered was that hospitals and health clinics didn't have reliable electrical power. So when the power went out, surgeries were being finished by kerosene lamp or flashlight.

When Dr. Stachel returned to the U.S., she enlisted the help of her husband, Hal Aronson, who had taught about renewable energy systems throughout California. They soon formed We Care Solar (wecaresolar.org/), a Berkeley, California non-profit that started with grants to develop a scalable power source to keep a blood bank, communications system and nearly 1-kilowatt solar system running in a Third World hospital when the power goes out. The entire system fits in a suitcase to minimize customs issues, and their \$1,500 Solar Suitcase continues to deliver compact solar power systems to health clinics around the world.

Mobile Cloud Gaming and Astonishing RPG Graphics

As mobile gaming becomes more popular, the available games are becoming more sophisticated (www.siliconvalley.com/ci_19492158). The cloud gaming service OnLive (www.onlive.com) is leading the way by releasing free apps that will allow users to play games from its service on tablets or smartphones. They also offer popular titles (like "Assassin's Creed") adapted to play on mobile devices, and have even developed touchscreen controls for several dozen games on their site.

Users can also play most of OnLive's several hundred games with a new wireless controller that the company offers for \$40. Consumers can buy or rent games from OnLive, and also play games on PCs and their televisions with a \$100 adapter sold by the company. So players can start a game on a mobile device, and continue it later on a PC or console. According to gaming business experts, OnLive is now "a formidable competitor to major game console makers."

As I wrote before, gaming is driving the development of better and more refined graphics. The Best RPG (role playing game) of 2011 is considered to be the just released "The Elder Scrolls V: Skyrim." A 21-minute video preview (www.g4tv.com/videos/55166/the-elder-scrolls-5-skyrim-full-e3-demo-video/) is breathtaking in the scope and detail of this latest version. Clearly, the video game graphics bar has been raised.

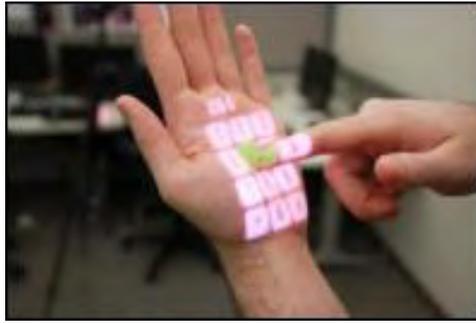
Cheap Photovoltaic Solar Panels Have Finally Arrived!

The prices of photovoltaic (PV) solar panels are plummeting, mainly due to China's global oversupply of low-cost panels (www.contracostatimes.com/business/ci_19498442). So now PV panels are more accessible and cost effective, and several large solar projects in California have announced plans to switch from solar thermal to PV. California utilities are required by state law to buy a third of their electricity from renewable sources by 2020. In 2010, the California Energy Commission approved nine utility-scale solar thermal power plants in California's Mojave and Colorado deserts. Now developers of five of those nine projects have announced that they are switching from solar thermal to PV. Similar shifts are happening in Arizona and Nevada.

Possibly because of the drop in the price of PV solar panels, Ikea has just announced that it is adding PV panels (www.sustainablebusiness.com/index.cfm/go/news.display/id/23220) to the roofs of all its stores in the U.S. South. Ikea has determined that a total of 10.7 megawatts will be generated by their nine stores and distribution center across the South. Ikea's products have long been recognized for green product design and energy efficiency, and their stores have been singled out for their sustainable efforts, from recycling to water and energy conservation.

"Big Data"—Floods and Nanophotonics

The Web 2.0 Summit in San Francisco in October 2011 reflected what Silicon Valley had been buzzing about for a year: What to do with the deluge of data (www.contracostatimes.com/technology/ci_19142069) that is overwhelming the Web industry. Dubbed "Big Data," the most common idea for Web companies is that they may have a goldmine on their hands with all that data—if they can just figure out how to make money from that flood of Tweets, photos and messages. According to Intel executive Kirk Skaugen, "There was more data transmitted over the Internet in 2010, than all the data ever transferred online before."



Also in October 2011, a "wearable projection system (nextbigfuture.com/2011/10/wearable-depth-sensing-projection.html)" was demonstrated, which can turn nearly any surface into a graphical, interactive surface.

Developed by Microsoft Research and Carnegie Mellon University, the OmniTouch system (www.chrisharrison.net/index.php/Research/OmniTouch) uses "a short-range depth camera and laser pico-projector, which is mounted on a user's shoulder." Photos and video show projected keypads reacting to finger-tracking on any surface, from the palm of a hand to paper tablets or walls.

With 3G and 4G mobile smartphone Internet access now, mobile broadband can actually be much faster in certain locations than residential DSL plans. But the cell data connections are still spotty in terms of Internet speed and coverage. Enter mobile routers (www.siliconvalley.com/personal-technology/ci_19356567). A review of three brands of mobile routers (Apollo, T-Mobile and Sprint, \$80-\$100) suggests that more refinement is called for, although Clear Spot 4G by Apollo was rated at the top.

In November 2011, Stanford University's School of Engineering demonstrated "an ultrafast nanoscale light-emitting diode (LED)." Its power consumption is minimal, yet it can transmit data at an astounding 10 billion bits per second (news.stanford.edu/pr/2011/pr-data-transmission-breakthrough-111511.html). Nanophotonics is at the heart of such technology, and the tiny device operates at room temperature. It could thus represent an important step toward next-gen computer chips.

Helpful Gadgets and Apps for People On-the-go

Are you—or are you married to—a man who travels so much that he could be called "the man in a suitcase"? Gizmodo took pity on such a man doomed to a career where he spends most of his life in airports, hotels and cabs. They offered some helpful gadget ideas (gizmodo.com/5869618/jetset-gifts-for-the-mythical-man-in-a-suitcase?tag=gift-guide) for a man on-the-go, from a mobile keyboard to a travel charging station and mobile electric shaver. And don't forget the watch that lets him keep time in two timezones.



And for the lady on-the-go, how about some "blinged-out pepper spray (jezebel.com/5869453/for-the-lady-who-has-everything-how-about-some-blinged+out-pepper-spray)"? Guardian Girls (guardiangirls.com), which makes stylish safety accessories for ladies, now offers pepper spray It Weapons. One pepper spray version is covered in Swarovski crystals for \$74.95.

Travel guide publisher, Lonely Planet, is now offering a mobile app (www.latimes.com/travel/deals/la-trb-new-york-app-lonely-planet-20121212,0,815273.story) on all the things you want to know as a tourist in New York City. You can download it from iTunes through the free mobile app called "Lonely Planet Travel

Guides, Phrasebooks and Maps," and select the New York City guide. (Note: The app was free when the article was printed in mid-December, but is probably \$5.99 by the time you read this.)

Marilyn is a freelance writer and humorist with many interests. She has sold teen anti-drug articles, as well as had numerous esoteric articles published. She has almost seventy mini-articles on Helium.com (www.helium.com/users/573405/show_articles), and is writing a humorous Young Adult Science Fiction series, *Chronicles of Mathias*. Volumes One and Two have received a "Gold Star for Excellence" from TeensReadToo.com (www.teensreadtoo.com/ReptilianRebirth.html), and are available from most on-line bookstores.

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Wally Wang's Apple Farm “Free Education” by Wally Wang

Free Education; The Book Business = Information Distribution; New 2012 Products; Electronic Arts' Daily Deals; The Stock Market Game App for the iPad; Irony of the Year; Forwarding and Redirecting Messages in the Macintosh Mail program.

Wally Wang's Apple Farm

In the old days, the only way to get a college education was to physically show up to classes at a college, sit at a desk to listen to a professor lecture, take notes, and read one or more books. Since colleges only offered classes at certain times and on their own campus, you had to physically live near a college and arrange your schedule so you could attend the lectures. For many people, those two requirements limited their chances of getting a college education.

Today with the Internet, those problems no longer exist. One simple way to get a college education (but without the official credentials) is to go through iTunes U within the iTunes program. Another solution is to go through MIT's Open Courseware (ocw.mit.edu), which has pledged to offer MIT's entire curriculum for free on their Web site.

The screenshot shows the MIT OpenCourseWare website. At the top, it says "MITOPENCOURSEWARE MASSACHUSETTS INSTITUTE OF TECHNOLOGY". There are navigation links for Home, Courses, Donate, About OCW, Help, and Contact Us. A search bar is present with the text "Enter search keyword" and "Advanced Search".

The main content area is titled "Electrical Engineering and Computer Science". Below the title is a photograph of students in a lab setting working on a robot. To the right of the photo is a "DONATE NOW" button and a text box that says "Please remember OCW in your end-of-year giving. Your support makes a difference. GIVE NOW >>".

Below the photo, there is a paragraph: "Graduates of MIT's electrical engineering and computer science department work in diverse industries and conduct research in a broad range of areas." followed by a link: "Read more about Electrical Engineering and Computer Science at MIT".

Underneath is a section titled "Available Courses" with a grid of course materials:

<input checked="" type="checkbox"/> Lecture notes	<input checked="" type="checkbox"/> Projects and examples	<input checked="" type="checkbox"/> Image Galleries
<input type="checkbox"/> Selected lecture notes	<input checked="" type="checkbox"/> Projects (no examples)	<input checked="" type="checkbox"/> Multimedia content
<input checked="" type="checkbox"/> Assignments and solutions	<input checked="" type="checkbox"/> Exams and solutions	<input checked="" type="checkbox"/> OCW Scholar
<input type="checkbox"/> Assignments (no solutions)	<input checked="" type="checkbox"/> Exams (no solutions)	<input checked="" type="checkbox"/> Study group
<input checked="" type="checkbox"/> Online textbooks		

Below the grid is a section for "Undergraduate Courses".

On the left side, there is a sidebar menu with categories like "Get Started with OCW", "Find Courses", "Architecture and Planning", "Engineering", "Health Sciences and Technology", etc.

Figure 1. MIT's Open CourseWare offers course materials in a variety of topics.

By studying course materials as video and PDF files, you can learn various topics at your own pace and then take exams to test your knowledge. Since learning by yourself can feel overwhelming to most people, find a friend or two who wants to learn and work together through the same course materials. That way you can help each other understand the information while also providing moral support so neither one feels alone, which would increase the chance of just throwing your hands up in despair and giving up.

The screenshot shows the MIT OpenCourseWare website interface. At the top, the MIT logo and 'MITOPENCOURSEWARE MASSACHUSETTS INSTITUTE OF TECHNOLOGY' are visible. Navigation links include Home, Courses, Donate, About OCW, Help, and Contact Us. A search bar is present with the text 'Enter search keyword'. On the right, there are links for 'SIGN UP FOR OCW NEWS' and social media icons for Twitter and Facebook.

The main content area is titled 'Lecture Notes' and includes a breadcrumb trail: Home > Courses > Electrical Engineering and Computer Science > Introduction to Algorithms > Lecture Notes. Below the title, a paragraph states: 'The lecture notes in this section were transcribed from the professors' handwritten notes by graduate student Pavitra Krishnaswamy. The handwritten notes can be found on the Lectures and Recitations page of the original 6.006 Web site.'

A table lists the lecture topics and supporting files:

LEC #	TOPICS	SUPPORTING FILES
Introduction and document distance		
L1	Introduction and document distance (PDF)	Document distance (docdist{1,2,3,4}.py)
L2	More document distance, mergesort (PDF)	Document distance (docdist{5,6}.py)
Binary search trees		
L3	Airplane scheduling, binary search trees (PDF - 1.4 MB)	Binary search trees (including code)
L4	Balanced binary search trees (PDF - 1.2 MB)	See binary search trees for AVL code
Hashing		
L5	Hashing I: chaining, hash functions (PDF)	Document distance (docdist-dict.py)
L6	Hashing II: table doubling, Karp-Rabin (PDF)	
L7	Hashing III: open addressing (PDF - 1.1 MB)	
Sorting		
L8	Sorting I: heaps (PDF - 1.0 MB)	
L9	Sorting II: heaps (PDF)	
L10	Sorting III: lower bounds, linear-time sorting (PDF)	
L11	Sorting IV: stable sorting, radix sort	

Figure 2. MIT's Open CourseWare offers free lecture notes, videos and exams.

MIT's Open CourseWare is just one of many free sources of education that anyone with Internet access can use to learn new topics and expand their own knowledge about topics they're already familiar with or exploring new topics that they know almost nothing about.

If you're a student, browse through MIT's Open CourseWare and get additional material to help you with your current classes or to get ahead for the next semester. If you're just learning for fun, then browse through the classes that interest you.

Learning by yourself through an online course requires self-discipline, but if it's a topic that interests you, you'll likely find it intriguing and exciting anyway. By browsing through the available courses and finding only the ones that interest you enough to complete them on your own, you'll know where your true talent might lie.

Ultimately what you know or what degrees you possess is less important than what you can do to produce useful results that solve important problems. Sarah Flannery, a 16-year old girl who won Ireland's Young Scientist of the Year Award in 1999, tells a story in her book *In Code* (www.

amazon.com/gp/product/B0046LUUEU/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=B0046LUUEU) about when she presented a talk at an IBM conference for women in technology. One of the attendees told Sarah that "Next to eye color, grade point average is the most useful indicator of a suitable applicant." As long as you know how to solve problems with whatever knowledge you have, you'll be vastly more important than someone with lots of college degrees who can't do anything useful but expects a lot of money and respect anyway.

With so many resources on the Internet available for learning something new, there's no excuse for remaining stuck in your current thinking and believing that everything you know about the world is all that ever exists. The more you learn, the more you realize how little you actually know, and that can go a long way towards becoming more tolerant of others once you realize that even your strongest opinion about anything could be completely wrong.

The Book Business = Information Distribution

The record companies used to think they were in the business selling vinyl records and later audio CDs. They didn't realize, until it was too late, that they were actually in the music distribution business and they just happened to be distributing music on vinyl records and audio CDs.

If they had thought of themselves as music distributors instead of vinyl record and audio CD distributors, they could have easily made the leap to distributing music over the Internet. Instead, they fought the inevitable and disappeared when they realized too late that they were in the wrong business.

Book publishers are going through this same identity crisis. Most publishers think they're in the book business when they're really in the information distribution business. Because publishers think they're selling books, they're focused on protecting the business model that revolves around printed books. If they thought of themselves as information providers, they would realize that it doesn't matter what format the information may be stored in just as long as they can distribute it to customers.

Today's e-books are basically digital versions of printed books that eliminate the advantages of printed books while offering the minor advantages of digital books that you can search through quickly or store easily. However, the real potential of e-books will arrive when they not only offer text, audio and video, but also interactivity and non-linear presentation.

Imagine a textbook that teaches you math and then displays problems for you to solve. As you try to solve these problems, the e-book can track your line of thinking and based on your logic, offer additional instruction tailored to help you best understand the material.

Today's e-books still present information in a linear fashion with text stored on sequential pages. However, some people may not want to read this information in sequential order but may prefer to jump around to different topics. To do this with today's e-books means skipping over large chunks of information. Yet wouldn't it be simpler if the e-book could just selectively hide the information you didn't want to see in the first place?

Tomorrow's e-books will be a combination of a book, multimedia presentation, computer

program, and hyperlinks so you can access the information you want, in the order you want, that may be completely different from the way someone else might access that same material. Today's books offer one way to present information. Tomorrow's e-books will offer many ways to present and access information, custom tailored to each person's learning and reading style.

As long as traditional publishers focus on the physical distribution of information in books, they'll be heading towards obsolescence. Printed books are simply one way to distribute information. Focusing on information distribution, whether in printed or digital form, is the real future of publishing.

New 2012 Products

Around April, expect to see the iPad 3, which should offer a better camera along with a sharper display. Also expect to see the iPhone 5, which will likely arrive by late summer or early autumn. The iPhone 5 will likely offer 4G connectivity as the major carriers expand their 4G networks around the world.

We can also expect slimmer MacBook Pro laptops that more closely resemble the MacBook Air along with new iMac models, although fewer people are buying desktop computers as more people prefer laptops for the mobility.

The two big mysteries for 2012 will be when will Apple update iWork for the Macintosh and what will Apple's TV product offer? The main feature Apple wants to offer is the ability to purchase only the shows they want and not be forced into buying a bundle of channels just for the handful of shows they actually like, which is how today's cable companies are gouging the public. Any time you have an industry exploiting the public, you can be sure change will eventually catch up to them and wipe them out in the future. Just ask the record stores why they kept the price of audio CDs so high for so long until digital distribution wiped them out completely.

The new year will also see Microsoft introduce Windows 8 on computers and tablets running on both Intel/AMD and ARM processors so we'll finally get to see whether Windows 8 tablets can compete with the third generation iPad. The last thing Microsoft wants is for Windows 8 tablets to follow the fate of Windows Phone 7 in attracting a tiny minority despite offering technically competent products.

Windows Phone 7 isn't bad, but it doesn't offer the massive leap forward that the iPhone and Android offered over Windows Mobile or Blackberry. Likewise, unless Windows 8 tablets can offer a massive advantage over the iPad, it may face an uphill battle attracting customers who want a tablet.

Electronic Arts' Daily Deals

If you got an iPhone, iPod touch, or iPad for Christmas, you may be interested in buying and downloading apps right away. To save money, visit Electronic Arts' Daily Deal page (www.eamobile.com/dailydeals/), which lists free apps (that previously cost money) or apps with special reduced prices.



EA DAILY DEALS

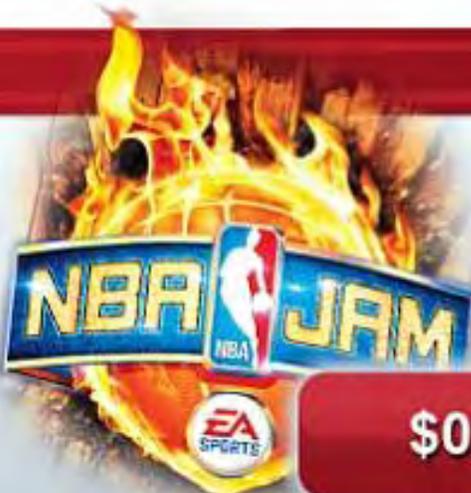
iPhone iPad Android Share

Today's Hot Deal:

NBA JAM

iPad

New Deal 9am PST / 12pm EST



\$0.99

MONOPOLY

iPad



\$0.99

NBA JAM

iPhone



\$0.99

MONOPOLY

iPhone



\$0.99

The Sims™ FreePlay

iPhone/iPad



FREE

Figure 3. Daily Deals offer reduced prices on commercial apps.

Besides offering different kinds of arcade style video games, Electronic Arts also offers iOS versions of popular board games such as Monopoly and The Game of Life. By playing a board game on your iPhone or iPad, you can focus on having fun and forget about the tedious details of handing out money or remembering all the rules. With the computer enforcing the rules and keeping track of the money, you won't have to worry about anyone cheating again.

The Stock Market Game App for the iPad

When most people think of iPhone/iPad games, they often think of arcade-type games like Angry Birds. Besides arcade-style games, there are also game apps that mimic ordinary board games such as Monopoly.

While Monopoly focused on simplified real estate investing, another old board game from 1963 taught simplified stock market investing. This game, called The Stock Market Game, is now out of print although you may still be able to find occasional copies on the Internet. If you don't want to pay a small fortune for an old board game, consider buying The Stock Market Game app for the iPad.



Figure 4. The Stock Market Game app mimics the board game.

The Stock Market Game app, written by Gerry Beggs, closely mimics the board game look and feel so you can play this old game for 99 cents on your iPad. Gerry Beggs has developed several programs for the iPhone, iPad and the Macintosh and agreed to chat about his experience.

1. What prompted you to develop apps for the iPhone/iPad?

Programming has been a hobby for me since I was 10 years old. I've always tried to find projects to work on that were fun. When I saw the iPhone for the first time, it seemed obvious to me that it would be a fun platform to work on. The idea of being able to create a program that you could carry in your pocket and use at any time was very attractive. When the iPad came out, it provided even more possibilities with a larger screen.

2. Why did you choose to create the Stock Market game as an app?

I'm always open for suggestions for a new project to work on. A friend and co-worker of mine mentioned a game that he really enjoyed while he was a kid. The game is no longer in production and the company that made it no longer exists. It looked like a fun project that offered some learning opportunities for me, so I went for it.

3. What have you done to market the Stock Market game app and which of those techniques have proven most effective?

Marketing? What's that? Seriously, I've done *no* marketing—and I've got the sales to prove it! I don't have a business bone in my body. I'm in it for the fun of working on the projects. Not in marketing them afterwards. Perhaps not a good business decision, but I have a "day job" to pay my bills.

4. What is your background regarding programming and what problems did you face in creating and selling the app?

Like I mentioned earlier, I've been programming since I was 10 years old. That was on a Commodore 64. It's hard to imagine now, but that computer lasted a long time. It wasn't until I entered University to take Computer Science that I started working on more "modern" systems. We developed in Solaris Unix and Macs (System 6 and 7 at the time). It was my university that exposed me to Macs and programming on them and that's what I've been programming on since. My "day job" requires programming in Windows (C#/.NET, VBA, VBScript) and some PL/SQL and T-SQL.

For each new project I start, I try to use it to learn something new that I haven't done before. For The Stock Market app, I took the opportunity to learn Core Animation. I had no real "problems" developing it, but that was something new I had to learn.

Apple does all the hard work with respect to selling the app. Like I mentioned, I've done no marketing. I put it up on the AppStore and let people find it on their own.

5. What type of people do you think would benefit the most from playing your Stock Market app?

Anyone who enjoys retro-style board games such as Monopoly and also enjoys working with numbers. The original board game required lots of "paper work" to keep track of stock values, but the iPad version takes care of all that for you.

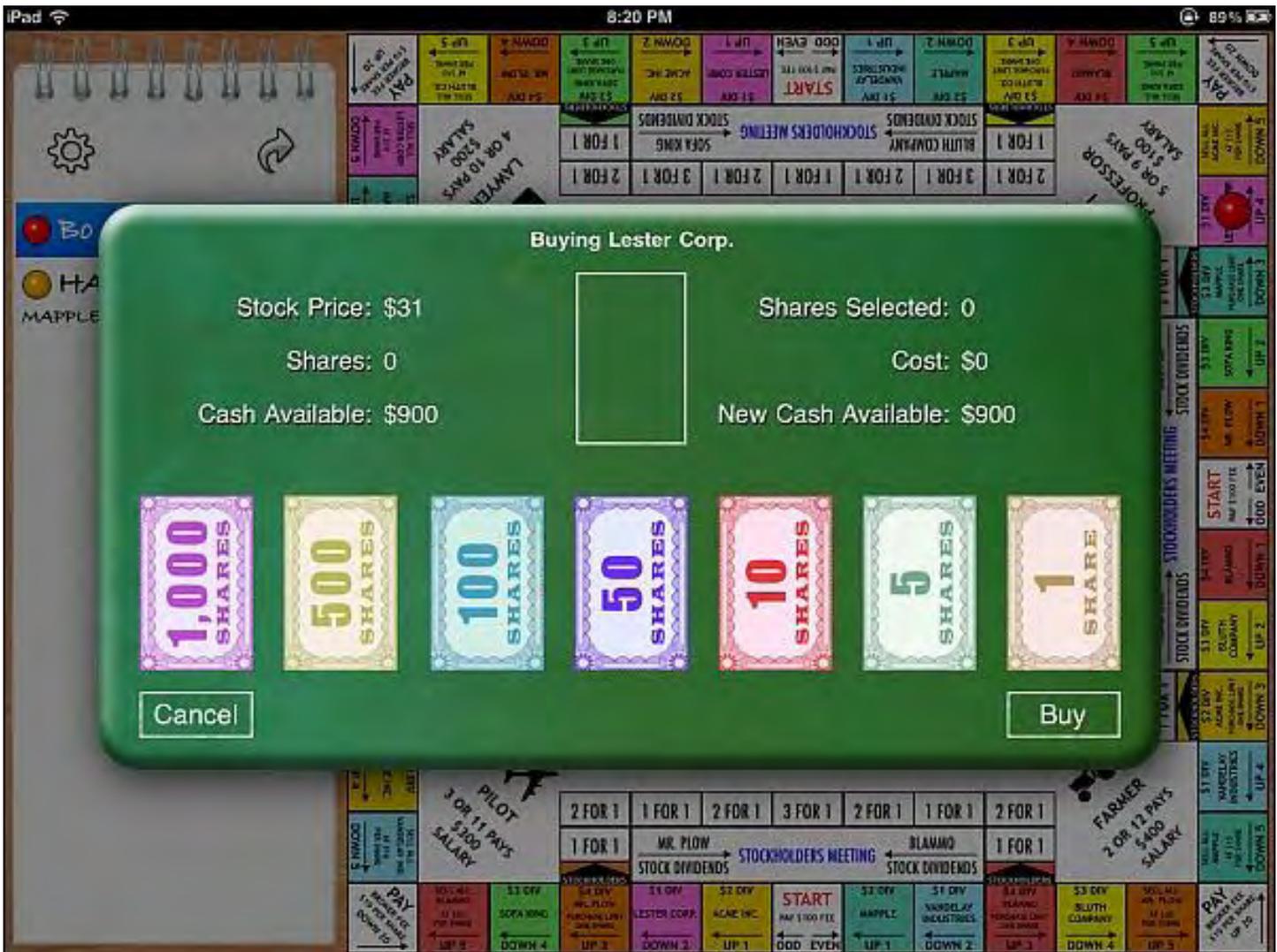


Figure 5. The Stock Market Game app handles money and enforces rules for you.

6. *What is the background for the Stock Market game and how difficult was it to translate a board game into an app?*

The Stock Market game is based on an actual board game from the '60s. It hasn't been in production since then and the company that created it no longer exists. I think my main challenge was being able to fit a large table-top board game into a 9.7" screen. There's lots of printing on the board which would not be readable if the board was shrunk down to fit on the iPad screen, so I had to come up with a way to enlarge parts of the board to make them readable. I did my best to reproduce the "feel" of the original game, and I'm told that I did a pretty good job.

7. *What kind of feedback have you gotten from people who have played your Stock Market game app?*

I've received only positive feedback from the people who've tried it, which I must admit has not been a lot of people. I've come to learn from some of my other projects that you can't please everyone. But with the Stock Market app, I haven't (yet) received any e-mails complaining that it doesn't have some obscure feature that this person absolutely needs.

8. What advice would you give others interested in creating and selling their own apps?

I'm not much for giving advice. For someone looking to make lots of money, I'd say to ask someone else because that's not what I've been trying to do. I'd just say do what interests you... do what you find fun to do. Otherwise, it's very easy to procrastinate and never get anything done. I've got that luxury, though, because this isn't my main source of income.

9. What do you see are the biggest pros and cons between developing for iOS, the Macintosh and Android?

Once you're a registered developer, Apple makes it very easy to publish your apps for iOS. Anyone familiar with developing for the Mac will be immediately familiar with developing for iOS. iOS is essentially a trimmed down version of MacOS with a new user interface API called "Cocoa Touch." Lots of code can be shared between MacOS and iOS apps and all the same developer tools for MacOS are also available for iOS.

I originally programmed for the Mac using the old-style APIs in Pascal and C/C++. Those were later "modernized" and given the name "Carbon." Now, even Carbon is deprecated. Objective C is the language and Cocoa is the API that was inherited from Next. I love programming in Cocoa. It might take some getting used to for people more familiar with C# and Java. I actually like C# and Java. Objective C has some faults of its own, but it has some great unique abilities and combined with Cocoa APIs, it's great.

I have no experience programming for Android, so I'm open to being corrected here. The problems that I'm aware of with programming for Android is that there are no standard devices, which will either require you to limit your app's audience by limiting which devices it will run on, or causes headaches if you try to support more devices with different abilities and screen sizes. This also makes it difficult to make an app that "looks good" on all devices.

Programming on Android is normally done in Java, which is interpreted bytecode. In order to get the most performance, you need to develop "native" code, but, again, there is no standard hardware, which requires you to limit which hardware your app will run on or to have to compile your native code for each processor you want to support.

10. Do you have plans to convert the Stock Market game to a Macintosh or a Windows program? If not, why not?

I have no immediate plans, no. But creating a Mac version would not be difficult. I've moved on to other projects. I may return to this project in the future and a Mac version is a definite possibility. But not right now. I don't have enough experience on Windows, which would require a complete re-write.

11. As a developer, what is your feeling about the future of iOS and Mac OS X compared to Windows?

I can't compare development with Windows from experience. But I know of people who program for Windows and none of them seem to enjoy it. They always have complaints directed toward Microsoft. I've always enjoyed developing on the Mac and now for iOS—but that's just one person's experience.

It's hard for me to predict what the future will be. Especially the future of both platforms compared to each other. I don't expect the differences to change much over time. It looks like Microsoft is trying to bring the touch interface to the desktop, while Apple has been a lot more conservative in that area. MacOS X does provide support for touch events, just not touch events on the screen... Only on a touchpad.

Who knows how that will change now that Steve Jobs has passed away, but I can certainly see his point of view that a touch interface is not natural on the desktop because your arms would get tired. But I can also see how it would be nice as a secondary way of interacting with some apps. Not 100% of the time, but just having it as an option when you want it might be nice.

12. What is the difference and difficulties between creating a board game app vs. a video game app that requires eye-hand coordination?

Well, the obvious difference is that "video game" apps put a lot higher priority on frame rates, where a board game can concentrate more on smaller details and improved AI. But regardless of the type of game you have, the user interface is most important. It doesn't matter what kind of magic your app can do. If the user doesn't enjoy using the app, the user will find another game/product to occupy their time/money. Developing the base functionality is only half the effort, in my opinion. Getting the interface "just right" can be a lot of work.

A board game that allows you to play against the computer requires a lot of work to make a good AI. I'm still not satisfied with the AI in Stock Market, but it is good enough to make playing against it enjoyable.

An arcade-style video game doesn't require as much effort to be put into the AI to make it enjoyable. But a good AI in either genre is important to ensure the game isn't too difficult or too easy, which may require user testing to get it "just right."

* * *

While the Stock Market game app may have little relation to the actual stock market, it can still be fun to play and introduce people to the basic idea of stock investing. You can see a Web page with screenshots and a YouTube video of the game in action by visiting Gerry's site (*Projects. GerrysCuppaTea.org/iPadStockMarket/index.html*).

Irony of the Year

Microsoft's Azure cloud service may be popular, yet one of its most requested features is support for Linux (www.zdnet.com/blog/open-source/microsoft-reluctantly-bows-to-linux-users/10074?tag=mantle_skin;content) according to ZDNet. Mary Jo Foley, who generally favors Microsoft products, reports that "Running Linux on Azure has been a surprisingly big business-customer request." The article goes on to conclude that "By almost six to one, cloud users preferred Linux over Windows. Microsoft's business customers are speaking, and they want Linux."

The unanswered question is why do so many businesses want Linux over Windows? If businesses prefer Linux over Windows, why do so many businesses still rely on Windows? If so many businesses would choose Linux over Windows, what does that say about the future of Windows in business?

* * *

In the Mail program that comes with every Macintosh, there are two ways to pass along e-mail messages to others. First, there's the Forward command that copies an entire message and lets you type additional text above it. When someone receives a forwarded message, it's obvious that the message came from another source.

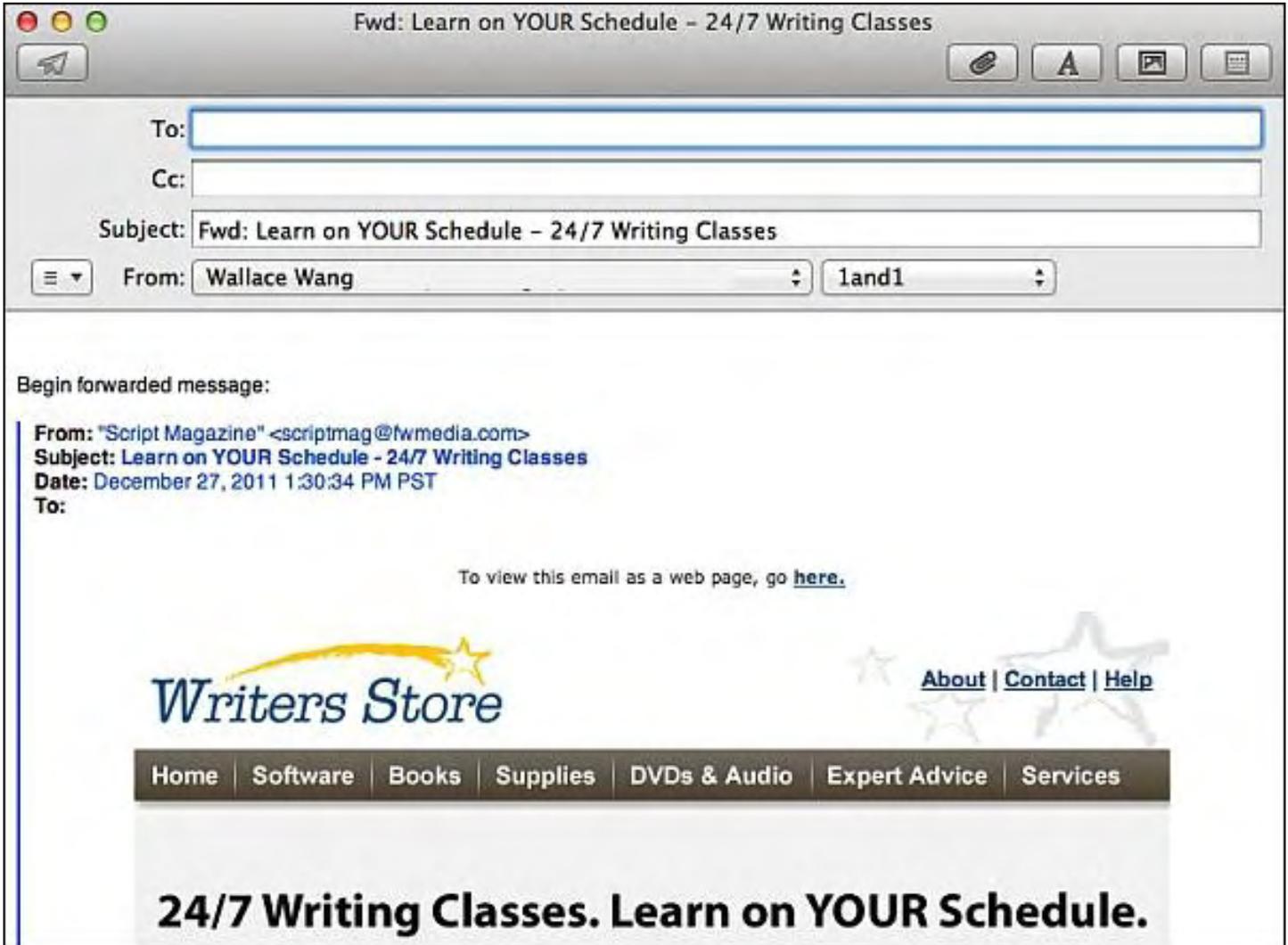


Figure 6. Forwarding a message displays the message's original source.

A second way to pass a message along to someone is the Redirect command. When you use Redirect, the message appears to have been created by you.

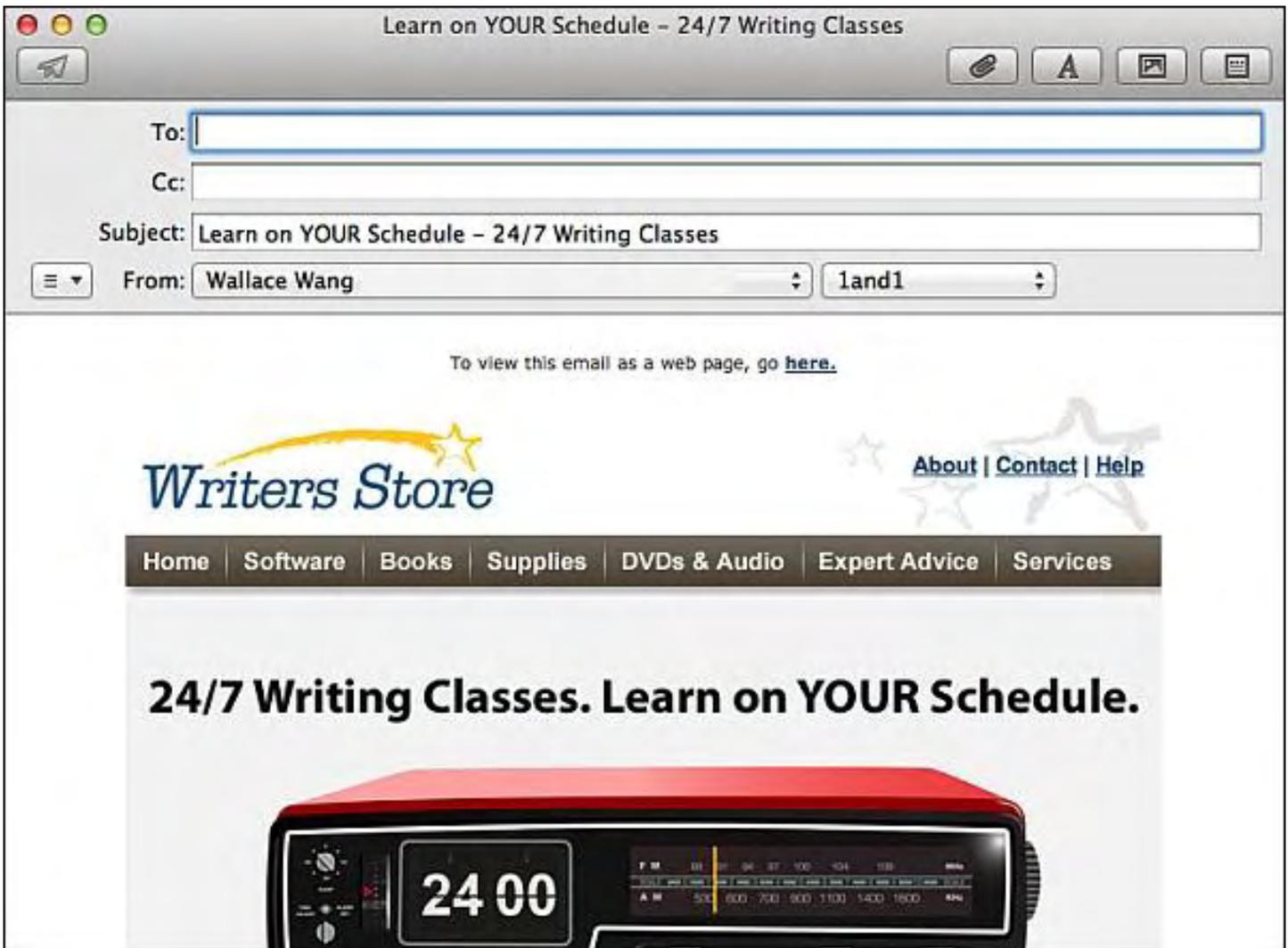


Figure 7. Redirecting a message disguises the fact that it may have come from someone else originally.

In the early days, before Wally became an Internationally renowned comedian, computer book writer, and generally cool guy, Wally Wang used to hang around The Byte Buyer dangling participles with Jack Dunning and go to the gym to pump iron with Dan Gookin.

Wally is responsible for the following books:

My New Mac, Lion Edition (www.amazon.com/gp/product/1593273908/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=217145&creative=399373&creativeASIN=1593273908)

My New iPad 2 (www.amazon.com/gp/product/159327386X/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=217145&creative=399373&creativeASIN=159327386X)

Steal This Computer Book (www.amazon.com/gp/product/1593271050?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593271050)

Microsoft Office 2010 For Dummies (www.amazon.com/gp/product/0470489987?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470489987)

Beginning Programming for Dummies (www.amazon.com/gp/product/0470088702?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470088702)

Beginning Programming for Dummies (www.amazon.com/gp/product/0470088702?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470088702)

Beginning Programming for Dummies (www.amazon.com/gp/product/0470088702?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470088702)

ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470088702)
Beginning Programming All-in-One Reference for Dummies (www.amazon.com/gp/product/0470108541?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470108541)
Breaking Into Acting for Dummies with Larry Garrison (www.amazon.com/gp/product/0764554468?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0764554468)
Strategic Entrepreneurism with Jon and Gerald Fisher (www.amazon.com/gp/product/1590791894?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=159079189)
How to Live with a Cat (When You Really Don't Want To) (www.amazon.com/gp/product/B006DJYL70/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=217145&creative=399373&creativeASIN=B006DJYL70)
The Secrets of the Wall Street Stock Traders (www.amazon.com/gp/product/B006DGCH4M/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=217145&creative=399373&creativeASIN=B006DGCH4M)
Mac Programming For Absolute Beginners (www.amazon.com/gp/product/1430233362?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1430233362)
99% Fairy Tales (Children's Stories the 1% Tell About the Rest of Us) (www.amazon.com/gp/product/B006QSKM3A/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=B006QSKM3A)
The Zen of Effortless Selling with Moe Abdou (www.amazon.com/gp/product/B006PUFPGI/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=B006PUFPGI)
The 15-Minute Movie Method (www.amazon.com/gp/product/B004TMD9K8/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=B004TMD9K8)

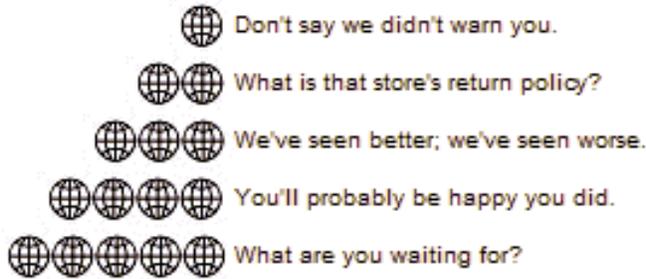
In his spare time, Wally likes blogging about movies and writing screenplays at his site "The 15 Minute Movie Method." (www.15minutemoviemethod.com/) Wally can be reached at wally@computoredge.com.

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Worldwide News & Product Reviews

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



Computer Learns Human Language; The State of the Web; Looking Beyond the Browser; Facebook "Likes" the Enterprise; Blackhat Sites and Phishing Spikes; What Is the Psychological Effect of Violent Video Games on Children?; Frozenbyte "Trine's" Again—and Succeeds.

Computer Learns Human Language

In a piece for TG Daily, Emma Woollacott wrote:

MIT has developed a machine-learning system that allows a computer to read the instructions for playing Civilization—in one of several different languages—and improve its game.

It's worth noting that game manuals don't give specific instructions for winning—just very general advice. However, once the computer was given the manual, its rate of victory jumped from 46 percent to 79 percent.

"Games are used as a test bed for artificial intelligence techniques simply because of their complexity," says SRK Branavan of University College London.

"Every action that you take in the game doesn't have a predetermined outcome, because the game or the opponent can randomly react to what you do. So you need a technique that can handle very complex scenarios that react in potentially random ways."



The system begins with virtually no prior knowledge about either the task or the language in which the instructions are written. It has a list of actions it can take—such as right-clicks, left-

clicks or moving the cursor.

It also has access to the information displayed on screen, and some way of gauging its success. But it doesn't know what actions correspond to what words in the instruction set, and it doesn't know what the objects in the game world represent.

Initially, then, its behavior is almost totally random. But as it takes various actions, different words appear on screen, and it can look for instances of those words in the instruction set. It can also search the surrounding text for associated words, and develop hypotheses about what actions those words correspond to. Hypotheses that consistently lead to good results are given greater credence, while those that consistently lead to bad results are discarded.

In the case of software installation, the system was able to reproduce 80 percent of the steps that a human reading the same instructions would execute. In the case of the computer game, it won 79 percent of the games it played, while a version that didn't rely on the written instructions won only 46 percent.

"If you'd asked me beforehand if I thought we could do this yet, I'd have said no," says Eugene Charniak, University Professor of Computer Science at Brown University. "You are building something where you have very little information about the domain, but you get clues from the domain itself."

Most complex computer games include algorithms that allow players to play against the computer, rather than against other people—meaning that programmers have to develop strategies for the computer to follow and then write the code that executes them. Branavan says the MIT system could make that job much easier, automatically creating better performing algorithms.

Read the entire piece at TG Daily (www.tgdaily.com/trendwatch-features/57190-computer-learns-human-language-to-teach-itself-to-play-games).

The State of the Web

Zscaler ThreatLabZ (www.zscaler.com) takes a look at Enterprise Web traffic aggregated across over a hundred billion transactions and millions of business users across the globe:

This quarter we continued to see the social elements of the Web dominate advanced threats and attacks in Enterprise networks. Leveraging sophisticated social engineering techniques to launch their attacks, malicious groups and hactivists know that human interest, curiosity and oversight represent the weakest link in any enterprise security chain. For that reason, ThreatLabZ wasn't surprised to see popular social networking applications leveraged as a top attack channel and target.

While these trusted social networks and applications continue to dominate enterprise Internet use, employees often have a false sense of security—trusting their favorite tools and apps to provide them "safe" information. However, hackers this quarter continued to take advantage of this trust to exploit corporate victims through Web apps, Web searches and targeted e-mail scams.

Three major trends noticeable in this report include:

- Facebook still dominates enterprise Web application use

Facebook still remains the dominant Web application in enterprise traffic—risking like-jacking, fake videos and spear-phishing

- Corporate mobile devices split between business and personal use.

While social networking remains the dominant source of mobile device traffic, business related traffic follows closely behind

- Blended threats continue to target browser plug-ins.

Browser plug-ins and extensions remain well out of date, providing a large target base for attacks.

Looking Beyond the Browser

Every quarter, Zscaler ThreatLabZ tracks enterprise HTTP and HTTPS traffic—including the specific browsers in use. This allows us to show trends in Web and browser use, as well as the vulnerabilities associated with them.

With the dominance of Microsoft end-user operating systems in the enterprise, Internet Explorer (IE) maintained its position as the most popular browser observed this quarter. Although Web browsers make up over 75% of HTTP and HTTPS traffic, the other non-browser traffic is worth looking at. This is made up of browser plug-ins, add-ons and extensions—as well as HTTP and HTTPS traffic from native applications.

In Q3, we continued to see a rise in non-browser Web traffic—being driven by mobile and desktop applications that leverage HTTP(S) for outbound communication. This is not entirely surprising, as most enterprises have "firewalled" off most ports beyond the ones needed for Web and e-mail traffic. As a result, ports 80 and 443 represent a viable egress point for any application.

Both mobile device usage and mobile device Web transactions logged through Zscaler's global security cloud infrastructure continue to grow. The highest percentage of Q3 mobile transactions through Zscaler's cloud was from Android devices—followed by Blackberry, and Apple iOS devices.

As mobile transactions from our enterprise customers continue to grow, we notice that the Android platform accounts for the largest and geographically dispersed user population. As well, it represents the mobile platform with the highest number of transactions through our cloud. The Apple iOS platform moved to third place this quarter, falling to 22.38% from 42.37% in Q2 2011. This is likely due to a growing sample size of mobile use outside the US.

Facebook "Likes" the Enterprise

Maintaining the trend seen in Q2 2011, social networking was once again the most dominant category of browsed Web applications through the Zscaler cloud in Q3. And, given its dominance in enterprise Web application use, Facebook once again led the pack. Yet, for the first time,

ThreatLabZ saw a slight month-to-month drop in enterprise client Facebook usage.

Meanwhile, other popular Web applications like Gmail, YouTube, Twitter and LinkedIn experienced a slight increase.

Similar to last quarter, social networking and Web mail made up the majority of the total Web application transactions for the quarter—with Web search representing a comparatively smaller percentage. The chart below provides a detailed drill-down of overall Web usage (by site) throughout the quarter:

Zscaler ThreatLabZ identifies and tracks malicious content in real time—across both HTTP and HTTPS. This gives Zscaler ThreatLabZ the information needed to identify the sources of malware, while tracking general trends in malware threats.

The top trend in malware continues to be the inclusion of iFrames within malicious content (often an exploit kit). In September 2011, greater than 67% of the antivirus signatures that triggered were on Web pages that had malicious iFrame inclusions. We have continued to notice a steady increase in security blocks—over time and throughout Q3—that resulted from malicious Web responses. Below are the top 10 malware types for Q3.

Blackhat Sites and Phishing Spikes

Blackhat SEO continues to be a tactic used by cyber criminals to increase Web traffic to their sites. Compared to last quarter, the number of search results leading to malware has decreased. However, the number of Spam sites (fake stores, fake search engines, etc.) using hijacked sites has increased. University Web sites (.edu) are still the main source of hijacked sites. The following chart breaks out the types of sites being served in these campaigns.

Every quarter Zscaler ThreatLabZ publishes our State of the Web report to provide some high-level trends observed from the large number of enterprise Web transactions traversing the Zscaler security cloud. Given the scale of transactions we see (over a hundred billion across millions of global users), ThreatLabZ is able to provide interesting data-points on enterprise browser usage, browser plug-ins, mobile devices, Web site categories and various security trends we observe.

Of the trends and data-points noticed this quarter, a few stand-out:

- A month-to-month percentage decline in enterprise Facebook usage.
- While Android mobile devices continue to be in the lead within our global user base, we noticed Apple iOS devices representing the largest quarterly increase.
- Malicious Web site responses—particularly those containing malicious iFrame or Javascript inclusions—appear to be on the rise.
- At the same time, the number of clients with vulnerable versions of browser plug-ins also seem to be on the rise.

What Is the Psychological Effect of Violent Video Games on Children?

Just in time to help you appraise that pile of video games your child got for Christmas, the Association for Psychological Science's Divya Menon posits: "Can a child's behavior be directly influenced by playing a violent video game? On balance, psychological scientists think so."

According to Brad Bushman, a communications and psychology professor at Ohio State University, the link between video games and aggressive behavior is clear: "One hundred forty studies have been conducted on aggressive behavior on over 68,000 participants around the world." Bushman says that these studies provide evidence that violent video games can lead to "an increase in aggressive thoughts, angry feelings, physiological arousal, including increased heart rate, and aggressive behavior."

But Christopher Ferguson, a psychologist at Texas A&M University, is of the opinion that research on media effects and aggression is inconsistent. Ferguson points to research that suggests that playing violent video games may have some positive effects for young adults, such as better stress management. He notes that "this field is really in the midst of a "paradigm shift," and we've been so busy coming to new understandings about violent video games and aggression, we haven't explored these other areas as much as we should."

Douglas Gentile, a developmental psychologist at Iowa State University, believes that the psychological science on the relationship between violent video games and behavior still holds up. "What we don't want is for parents to come away saying 'Oh, so I don't need to worry,'" says Gentile. [The recent ruling by the United States Supreme Court overturned a California law banning the sale or rental of violent video games to minors] "doesn't negate the science [nor does it mean] that parents don't need to be involved. The research shows that when parents set limits on children's media use, it is a powerful protective factor for children."

Learn more at the Psychological Science in the Public Interest Web site (www.psychologicalscience.org). Read the entire study, "The Influence of Media Violence on Youth" (www.psychologicalscience.org/pdf/pspi/pspi43.pdf).

Frozenbyte "Trine's" Again—and Succeeds

If the previous item about video game violence concerns you, Trine 2 (rhymes with "line) has earned an E10+ rating thanks to its very low blood and gore quotient. I would give it a one or two on a 10 point violence scale—a three being what my wife does to my shins under the restaurant table when I accidentally mention the year she graduated from college.



Trine 2 (www.frozenbyte.com) is the sequel to the downloadable PC, Mac, Xbox 360 and PS3 action game of a couple of years ago (about \$14.95 for PC, download on Steam (www.steampowered.com) or from the developer site). Both Trines are so-called 2D platformers—you play through the entire game scrolling from left to right—but you'd hardly know it because they're so gorgeous to look at and so well constructed that you completely forget the meaning of the term "old school."

One of the things I liked most about both Trine games is that they are "bite-sized." You can play for a few minutes or a few hours. There's not much of a story; it's really about getting past bad guys, out of tight spots, and solving physics-based puzzles: How do I get over that pit of lava while those canons are shooting fireballs at me?



Trine 2 seemed to have more puzzles than the first game, which I liked. And there are often several ways to solve them: Play as the wizard and levitate or create objects to proceed. Become the thief and shoot arrows and climb ropes to get up and over. You can also power your way through many tricky situations playing as the warrior. Portal fans may appreciate that Trine 2 puts its own spin at the portal gimmick.

Trine 2 improves the feature-set allowing you to play with friends both locally or online. Play the entire game start to finish or just fool around throwing boxes, boulders and orcs at one another.

Amazing little game. While you're at it, look for special pricing on Trine 1 as well. If you're a PC user, check out Steam (www.steampowered.com). Should be able to pick up Trine 1 for a few bucks. There are also demos of both games at the Frozenbyte and Steam sites.



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

Carr has covered such diverse topics as pesticide use in area schools, invasive background checks for county volunteers, asthma awareness, the debate over standards-based grading,

potential vulnerabilities in electronic voting machines, and Southern California's devastating 2003 and 2007 wildfires. He has also written many humorous pieces.

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

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

Carr has judged many writing competitions including San Diego Press Club and Time-Warner Communications contests and was sole judge for the national NAPPA Tech Toys awards for five years (which his kids really appreciated). He was recently a judge for the national "Poetry Out Loud" competition.

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

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

Learn more at www.charlescarr.com.

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Editor's Letters: Tips and Thoughts from Readers

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

"OpenOffice.org Talk," "Full Disk Drive," "Poor Streaming Video Quality"

OpenOffice.org Talk

[Regarding Rob Spahitz's December 16 article, "OpenOffice.org Free Productivity Software":]

It's my understanding that OpenOffice isn't being supported much, if at all anymore, leading many Linux distributions to move to LibreOffice. Virtually identical in terms of programs and use, but it's well supported. Also available on Windows, Mac, Linux and many other *nix OS for uniformity.

-Rich Ernst, San Diego

LibreOffice (www.libreoffice.org/) came about as a fork of OpenOffice.org (en.wikipedia.org/wiki/OpenOffice.org) precisely because Sun Systems was being too heavy handed in its control and support. Oracle has since taken over Sun Systems and in "June 2011 contributed the suite [OpenOffice.org] to the Apache Incubator to become a project of the Apache Software Foundation," which controls the fine Open Source Apache Web server software. Time will tell to what extent OpenOffice.org will get the support of the Open Source community, but nothing is lost by downloading and trying it out. Since LibreOffice is an offshoot of OpenOffice.org, a person can easily switch to the closely related set of Open Source programs at any time.

-Jack Dunning, ComputerEdge

I liked your article on OpenOffice. I've been using it for years now. Besides the suite being free, I also noticed that a spreadsheet saved in OpenOffice was about 1/3 the size of the same spreadsheet saved in MS Office.

I've found OpenOffice sufficient for almost all of my needs with the exception of an equivalent for MS PageMaker. The only open source equivalent I've come across is Scribd. It seems to have such a steep learning curve that it is rather intimidating. Are you aware of any other alternatives, maybe some that are a little more polished and novice friendly?

-Paul, Denver, CO

I purchased a new Lenovo Laptop this year. It came with a free version of Office Starter 2010, Excel Starter, etc. They seem comprehensive enough for my use. I wonder if this is to retaliate to free office suites? I would like to hear your critique of these free Microsoft programs that are now bundled with new computers.

-George A, San Diego

I was just wondering if y'all had heard about LibreOffice. It is fork of OpenOffice that may interest you. I used to use Open Office, however I have found that I prefer LibreOffice lately. It seems to run faster for me and it gets updated faster.

-Donja Carroll, Poquoson, VA

Full Disk Drive

[Regarding the December 23 Digital Dave column:]

Hello Dave,

In that article you recommended running "Disk Cleanup" to help free more space on his hard drive. Then you show an example of the pop-up that shows on screen during the process. There are a lot of boxes on that list that have no check marks in front of them. Is it safe to go through and check all those boxes to completely clean everything?

Thank you,

-Jerry Hughes, San Diego

Yes, you should be able to delete all of those files. If you're not sure, click on the entry and a description will appear below. For example, on laptops "Hibernation File Cleaner" may appear. If you delete this, your computer will not be able to Hibernate, but the description will tell you that. Look for items that will have the most impact. Often "Temporary Files" (not shown in the image) will have the most impact.

-Digital Dave

Poor Streaming Video Quality

[Regarding the December 16 Digital Dave column:]

"With the exception of limited availability of streaming movies, there is no longer any reason to physically mail this data back and forth."

The main reason to use the mail is quality and I think it will be a long time before streaming can provide the audio and video quality of a Blu-ray. Even the claimed 1080p is so compressed it looks like crap and the high-def audio stream (Dobly TrueHD or DTS HD) are never provided. In most cases, streaming providers are not even providing DVD level video and audio quality (which is 480p and mp3 type audio). Even my wife complains when we watch on-demand. It may be a niche market, but those who invested in big high-def TVs and audio systems are missing a lot with streaming services.

-Chris, San Diego, CA

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 (webserver.computoredge.com/online.mvc?src=ebook). 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 contribute to ComputerEdge endeavors, please visit ComputerEdge E-Books (www.computoredgebooks.com/Contribute-to-ComputerEdge-Magazine_c3.htm).

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ComputerEdge Magazine, P.O. Box 83086, San Diego, CA 92138. (858) 573-0315