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This issue: The Government and Its Computers

The U.S. Government has a massive number of computers. With them come massive computer problems.

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Digital Dave

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

Disabling the Mouse Touch Pad; Netflix Question; Yahoo on Internet Explorer.

Dear Digital Dave,

I have a Dell Inspiron 9300 Laptop that's five years old. I can't disable the touch pad. When I use the external USB mouse, inevitably my hand touches the touch pad and affects the mouse. I've tried searching the Internet without being able to solve my problem. Can you help me please?

Thank you for your attention.

*Dan Bongiorno
York, PA*

Dear Dan,

This is a problem, especially on laptops with no on/off button for the touch pad. The older touch pads are more of a nuisance than a help. Today, a touch pad may be multi-touch with a clicking capability such as those found on Apple laptops. This type of pad can be quite useful. However, in your case, it just gets in the way.

You should be able to disable the touch pad in the mouse setup program found in the Control Panel. Select the pad in the Device Settings tab of the Mouse Properties window, click Disable, then Apply (see Figure 1).

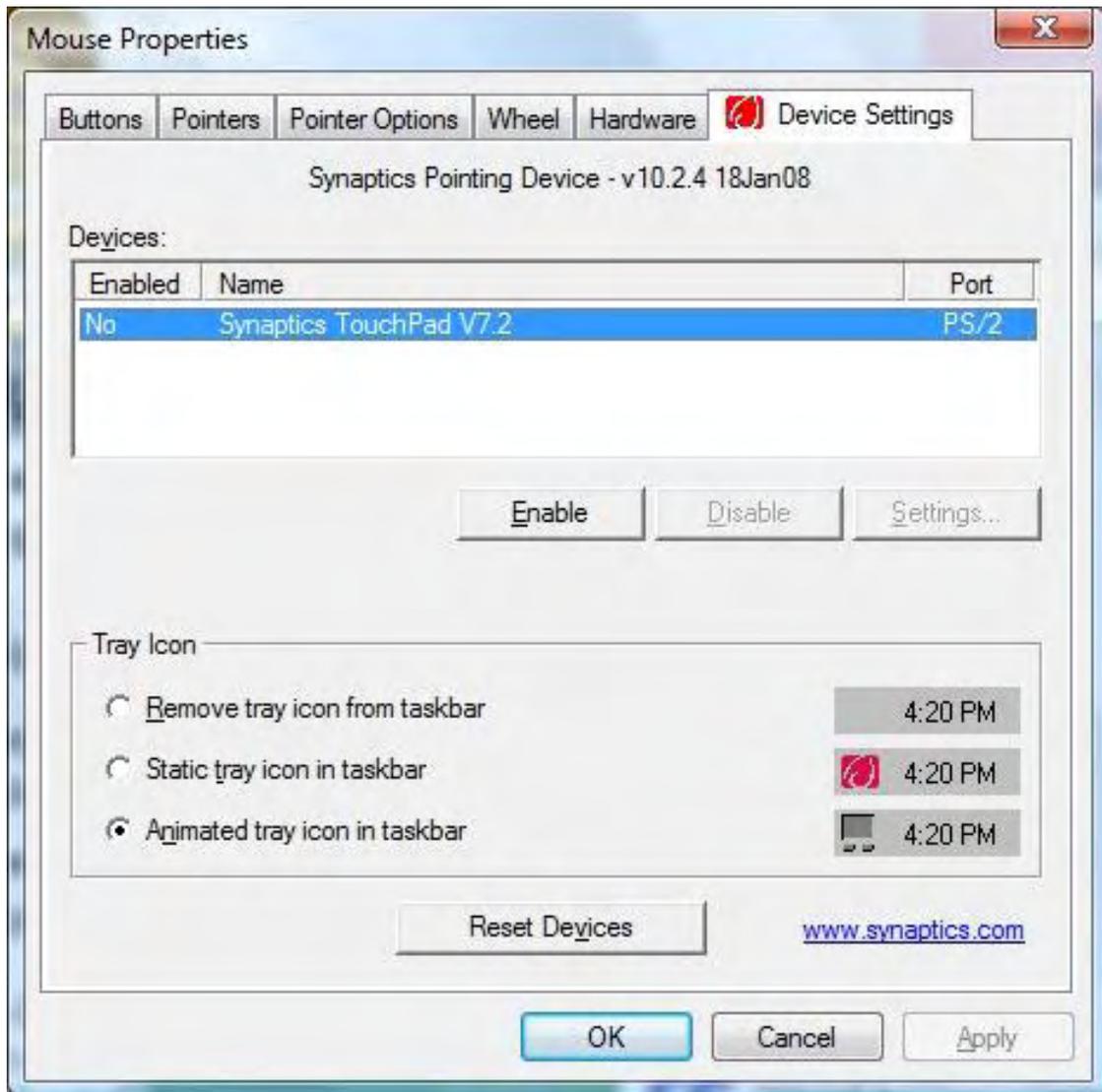


Figure 1. Disabling the touch pad in Windows.

The only caution is that starting up the computer without your mouse could become a real hassle, unless you're comfortable with navigating around your computer with only a keyboard. That's why I prefer laptops with a touch pad switch.

Digital Dave

Dear Digital Dave,

I had my computer (Win7) hooked up to my TV USB-HDMI, and everything working fine watching Netflix movies—then a three week pause. When I went to use it today, I can't get it to come to the TV. I suspect I changed a setting during that off time, but don't know where. Can you help me out?

Thanks,

*Bob Morris
Escondido, CA*

Dear Bob,

When you set up your computer to feed Netflix to your television you are effectively using the TV as a second monitor. For the second monitor to display the output from your computer you need to turn it on in the display settings in Control Panel Windows. The exact way you do this will vary depending upon the version of your operating system.

If you right-click on the Desktop, there are a couple of possibilities. The most obvious on Windows computers is to select Personalize and navigate to the Display settings. These settings can also be found through the Control Panel. (In Windows 7, you can type "connect" in the Start Menu search field and pick "Connect to an external display" from the list.) It is also possible that you will have a "Graphics Properties" option in that same Desktop right-click menu. If available, that program would be another alternative. Make sure that the television (the second monitor) is setup to duplicate what is on your computer screen,

If you're using a laptop to feed your computer then there are often function keys which will turn your external monitor feed (the TV) on and off. The settings usually toggle to both laptop and external, external only, and back to laptop only.

Digital Dave

Dear Digital Dave,

I am using Windows Vista Home as my operating system. Recently I decided to upgrade my Windows Internet Explorer to version 9. After I downloaded it I became aware that it became "Windows Internet Explorer powered by Yahoo." I have tried many ways to delete this and go with "the original by Microsoft." I deleted version 9 powered by Yahoo and attempted to go back to Microsoft version 8, but it still is powered by Yahoo. How do I uninstall the "powered by Yahoo" completely? I have tried Windows Help going through Control Panel-Programs and Features in the search box, etc. and through Internet Options. I am stumped. Help! Have you discussed this problem in past articles? If so, what month and year—I save them all!

Thank you for a solution to this very frustrating situation.

*Brian S.
La Jolla, CA*

Dear Brian,

I think your problem may have been that you downloaded Internet Explorer from Yahoo rather than Microsoft. I made a point of installing version 9 directly from the source—actually it was sitting in my list of Microsoft updates waiting to be downloaded and installed. Your question motivated me to give it a try.

Once installed, I saw no sign of Yahoo anywhere in the browser. In fact in a obvious attempt to copy Google Chrome's minimalistic approach to browsers, even the name Microsoft didn't appear anywhere on my screen. The version you have must be tailor by Yahoo (advertising opportunity).

It's possible that uninstalling the current Yahoo version, then downloading and installing directly

from Microsoft could fix your problem. You should probably do this in any case. Once you've installed the Microsoft generic version, you may be able to change some of the Yahoo settings.

Even after installing the vanilla version, it is just as likely that Yahoo made changes through a registry entries, in which case, you might continue to see the annoyance. Run the regedit program and do a search for the word Yahoo. If it is there, it will probably be at HKEY_CURRENT_USER*backslash*Software*backslash*microsoft*backslash*Internet Explorer*backslash*Main with the entry name Window Title. If so, edit it to remove Yahoo, or change it to your name.

Digital Dave

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The U.S. Government's Unique Computing Experiences

"Terrorist-hackers to Supercomputers" by Marilyn K. Martin

Issues with the The Federal Government's computer network can have monumental consequences—and you thought you had computer problems? These issues range from flight delays to military misfires.

For every virus, error, hack attempt or spyware we battle on our personal or company PCs, you can probably safely multiply that by a thousand for what the U.S. Government computers battle practically every minute.

The "U.S. Computer Fraud and Abuse Act" was passed in 1986, and continues to undergo amendments. According to Wikipedia, it was "intended to reduce cracking of computer systems, and to address federal computer-related offenses." It also covers some private companies, like certain financial institutions, "with a compelling federal interest," as well as computers involved in interstate and international commerce.

It was amended in 2008 by the "Identify Theft Enforcement and Restitution Act." Subsection (b) of the Act punishes anyone "who not only just commits or attempts to commit (ID theft), but also those who conspire to do so."

As with any massive computer network, like our Federal Government, even a minor error or slip-up can have monumental consequences. So if you think your home PC or private industry computers have mind-boggling daily problems, then read on.

Cyber-Terrorism and Info-Sharing

Today, the government has multiple computer entities, mostly connected to specific agencies or military branches. As expected, some of these share data with other government computer entities and even private industry. While others operate autonomously and guard their secrecy.

In 2003, the government created US-CERT, or the United States Computer Emergency Readiness Team. According to their Web site (*us-cert.gov*), it is "charged with providing response

support and defense against cyber attacks for the Federal Civil Executive Branch. And information sharing and collaboration with state and local governments, industry and international partners."

CERT is the operational arm of the National Cyber Security Division (NCSD) at the Department of Homeland Security. What is unique, is that their homepage contains Security Alerts, Bulletins, Vulnerabilities and Tips divided between "Technical" and "Non-technical" users.

CERT most recently issued a March 2011 warning to a variety of industrial control systems, to repair their software security vulnerabilities by developing patches. These "remotely exploitable vulnerabilities" could allow Internet hackers to get into these systems to steal or manipulate data.

A 2008 government report by Clay Wilson was titled "Botnets, Cybercrime and Cyberterrorism: Vulnerabilities and Policy Issues for Congress." It paints a scary scenario about trying to keep government computers secure. "Cybercrime is becoming more organized and established as a trans-national business," it starts out. "High technology online skills are now available for rent to a variety of customers, possibly including nation states, or individuals and groups that could secretly represent terrorist groups."



"I don't want to be the one to tell the President that his avatars for his World of Warcraft Internet game were deleted."

Today, Government IT Professionals even have their own Web site (*gcn.com*), called the "Government Computer News." This site promotes "interagency cooperation, reuse of software and rapid development." Every year they give out Awards for Government IT Achievement. Some of the 2010 winners were the U.S. Postal System ("Full Service Program"), the Army ("Biometric Identification System for Access") and FEMA ("Disaster Assistance Improvement Program").

There is also a "Federal Computer Week" online magazine (*fcw.com*), with their own library of archived articles, Web casts and Community Awards. This site most recently offered a "special joint report on cyber security and unified communications," compiled by both the FCW and GCN (see above).

Ready for Y2K

Remember the hysteria over Y2K, as the year 2000 loomed? Our government was ready! \$50 million worth of custom computer systems were built for the Y2K government Command Center. This Command Center worked to ensure a smooth transition to the year 2000 on January 1st. This included consideration of another tricky problem: 2000 was also a Leap Year.

When the midnight rollover from 1999 to 2000 went smoothly, the Y2K Command Center turned to the next problem: Would the day after Feb. 28 become Feb. 29? Or a completely wrong other date that would also threaten a melt-down of government computers?

John Koskinen, President Clinton's top Y2K Technology Aide, referred to the date-to-be-named after Feb. 28 as "a real issue that we feel obligated to keep track of." Thus, starting on Feb. 28, Y2K computer experts from the U.S. and up to twelve other countries held conference calls every eight hours through March 1st.

Programming Errors

In February 2010, a coalition of government, academic and private-sector security organizations were working on an updated version of "The Top 25 Programming Errors," designed to help the government and private industry better manage computer risk. The list contained everything from "Failure to Preserve Web Page Structure" to "Cross-Site Request Forgery," "Missing Encryption of Sensitive Data," and "Improper Check for Unusual or Exceptional Conditions."

This list was aimed at custom software developers who create computer programs by contract for the government or other large private institutions, rather than retail software vendors. The goal was to put the responsibility of basic software security on the software developer, rather than the customer.

Then Along Came Stuxnet

By the Fall of 2010, a brand new kind of computer worm appeared on the scene. According to a Symantec PDF, the Stuxnet Worm was the first of its kind that was capable of attacking critical infrastructure like power stations and electric grids.

Stuxnet heralded a new and frightening phase of computer malware. Beyond viruses and trojans that delete key system files or documents or prevent Web site access, worms like Stuxnet could threaten lives by shutting down or controlling critical industrial systems.

Computer experts had been expecting it for years (like in the movie "Live Free and Die Hard"). And in September 2010, Iran reported that their Bushehr nuclear power plant had been infected. "Giving an attacker control of industrial systems like a dam, a sewage plant or a power station is extremely unusual," said Patrick Fitzgerald of Symantec. "And makes this a serious threat with huge real world implications."

By January 2011, it was reported that Stuxnet had wiped out roughly a fifth of Iran's nuclear centrifuges. And had significantly delayed Tehran's ability to make its first nuclear arms.

Also in early 2011, private computer security vendors were beginning to advertise software for protection against Stuxnet and similarly invasive computer worms. But, according to the experts, "the genie is out of the bottle," and more serious computer worms like Stuxnet are probably on the horizon.

Computer Flight Delays

In August 2008, the Federal Aviation Administration's computer systems had an incident where flights all over the U.S. were delayed. The FAA attributed the error to a "database mismatch" that

interfered with data transmission. But as airlines were busy adding new flights, the Government Accountability Office (GAO) warned that the FAA's computer systems were outdated and overburdened. Sure enough, one in five airline flights were delayed or canceled between January and October 2009.

The very next month, November 19, 2009, a Federal Aviation Administration (FAA) software problem caused flight delays across the country. Airlines suddenly couldn't enter flight plan information into the National Airspace Data Interchange Network (NADIN).

FAA personnel had to enter the information manually, and the additional time needed resulted in flight delays all day. A "software configuration problem with a router in Salt Lake City" was blamed. And the Wall Street Journal later reported that the FAA computer systems that provide information on weather and wind speeds at airports weren't functioning either.

The FAA is now moving toward the Next Generation Air Transportation System. Some of the changes will be implemented between 2012 and 2018, but it won't be fully operational until 2025. However, the GAO reports that the FAA needs to change its culture and business practices for the Next Gen system to work. The main obstacle for the FAA, according to the GAO, is that they need to focus less on system acquisition, and put more emphasis on integration and coordination.

Computers and Military Misfires

A delayed flight is very frustrating, with missed connections and lost luggage. But a loss of life due to a math error and a missile failure, is another kettle of fish indeed. On February 25, 1991, during the first Gulf War, an American Patriot Missile battery in Saudi Arabia failed to intercept an incoming Iraqi Scud missile, which struck an American Army barracks and killed 28 soldiers.

A subsequent GAO report was titled "Patriot Missile Defense: Software Problem Led to System Failure at Dhahran, Saudi Arabia." The Patriot Missile missed the Scud due to an inaccurate calculation of the time since boot due to computer arithmetic errors. The time in tenths of a second as measured by the system's internal clock was multiplied to produce the time in full seconds. This led to a significant error where the incoming Scud was outside the "range gate" that the Patriot system tracked.

The Minoit Air Force Base in North Dakota suffered through a rash of mysterious deaths and nuclear-related incidents prior to 2009. It's murky whether human or computer errors were to blame, but serious breaches of security were chronicled. One AF Officer was court martialed in 2008, for stealing a launch control device as a "souvenir," rather than destroying it as required, when the device was no longer in use.

Conspiracy theorists have chronicled decades of incidents where Air Force planes carrying nuclear weapons over U.S. soil malfunctioned and/or crashed, occasionally detonating the nuclear weapons. One unconfirmed report says that six nuclear weapons "accidentally" departed from Minoit AFB aboard a B-52H on August 30, 2007. The plane supposedly landed at Barksdale AFB in Louisiana with only five nuclear weapons. Another arithmetic error?

On October 26, 2010, a series of computer errors at an Air Force Base in Wyoming, took 50 nuclear intercontinental ballistic missiles (1/9 of the U.S. missile stockpile), offline for about an hour. Engineers thought that the outage was caused by a hardware failure in a launch control

computer, rather than the reported power outage.

Laptops-to-be-Abused: Apply to U.S. Government

Computer hardware vendors target a lot of advertising at the U.S. government, simply because the government can buy in monster quantities. Some vendors even develop certain "rugged" mobile computers for government employees to use in many different and harsh environments. And some companies even offer "BTO" (Built-to-Order) options.

Panasonic advertises a "Toughbook" mobile laptop or notebook computer. The advertising brags that the Toughbook can "withstand bangs, bumps and spillage." While an upgraded model, the "Toughbook U1," is designed to "survive extreme conditions, such as drops up to six feet, rain, oil, pressure, dust and extraordinary swings in temperature."

These "rugged" mobile computers are obviously aimed at military, emergency, law enforcement and other field-type operations. Dell offers a "Latitude E6400 XFR," with a Thermal Management System and a Ballistic Armor Protection System. "Durabook" claims they are veteran-owned, and offers a half dozen laptop models with such features as Convertible Touchscreen, Mobile Intel Low Voltage and Outdoor Viewable Display.

Mega-Hardware for a Mega-Government

Beyond buying massive quantities of laptops, the government can also afford to contract with hardware vendors to build super-computers to the government's specs.

This one-of-a-kind type of computer hardware has obvious security advantages, especially if also paired with designed-to-spec software. Although you may not want to be the IT professional "working the bugs out" of such massive and specialized systems.

In 2009 it was announced that IBM had been contracted to build a super-computer that would be twenty times more powerful than the world's fastest computer. Called "Sequoia," the massive system is expected to deliver 20 petaflops of computing power to the National Nuclear Security Administration (part of the Department of Energy). IBM was also contracted to build a 500 teraflop computer called "Dawn," to provide the application foundation for computing on "Sequoia."

An article from May 2010 asserted that of the Top Ten Super-computers in use around the world, the U.S. government owns six of them. These include Los Alamos National Laboratory's "Roadrunner" (ranked second in the world), and NASA Ames Research Center's "Pleiades."

The "Jaguar" at the Oak Ridge National Laboratory, was ranked as the most powerful super-computer in the world at that time. It peaks at 2.33 petaflops, and has two partitions, one of which has a mind-boggling 598 terabytes of memory. However, a later November 2010 article claims that China now has the world's fastest super-computer. The "Tianhe-1" has the computing speed of 2,570 trillion calculations per second. This would drop the "Jaquar" to the world's second spot, with a speed of "only" 1,750 trillion calculations per second.

In December 2010, the Defense Information Systems Agency (DISA) announced that they are accepting proposals to upgrade the network connecting its super-computers. This starts the process that will connect several Department of Defense (DoD) super-computing centers with a

network consisting of more than 200 service delivery points with varying bandwidths. These are scattered across the continental U.S. and overseas. This proposed high speed system will connect some 4,300 researchers across the country to six DoD super-computing facilities.

In February 2011, it was announced that IBM was also contracted to build a 750,000 core super-computer called "Mira," for the Department of Energy's Argonne National Laboratory. It is expected to deliver a maximum performance of 10 petaflops, and be capable of running about 10 quadrillion calculations per second.

An upcoming June 2011 "International Supercomputing Conference" will be held in Hamburg, Germany. Their list of super-computer exhibitors is already up to 134, with 250 experts participating in keynotes, panels and other presentation capacities. Clearly, the Age of the Super-Computer has arrived.

E-Security and Destroying Hardware

Congress and state laws grapple with a patchwork of "electronic recycling laws," of how to safely deal with old computers. In 2007, the U.S. Environmental Protection Agency (EPA) said that more than 63 million U.S. computers were traded-in for replacements. Or were simply discarded. And only 15% of "electronic waste" was being recycled.

"Data security," according to federal regulations, mandates that there can be no information security leaks in the entire life cycle of secure data. That includes the destruction or recycling of old computers. An IBM survey found that, although most people try to wipe their hard drives clean before disposing of their old computers, only 5% of the public rely on an industry or third party to completely clean their to-be-disposed-of computer.

There is even an entire international trade association now, the National Association for Information Destruction (NAID). They provide information and services compliant with the standards and ethics of securely destroying hard drives, while still recycling the by-products. Their guidelines include "Receive and store hardware for destruction in locked and securely transported vehicles" and "Shred hard drives."

This is what the Pentagon does with its old hard drives: runs them through a metal shredder. One can only assume that the rest of the mainstream government computer hardware is destroyed the same way, or in accordance with the NAID and federal guidelines.

The Future?

Along with the rest of the world, the Electronic Age has brought computing on a massive scale to the U.S. government. If the recent past is any indication, expect even more powerful and faster super-computers, and more mobile-laptops with GPS connections to anywhere in the world.

The only note of caution comes from the Pentagon, which warns of too much reliance on GPS satellites. China has already demonstrated an ability to destroy a satellite in orbit. Will our militaries have adequate "alternate route" communications if too many of our communications satellites are destroyed? Stay tuned ...

Marilyn K. Martin is a freelance writer of nonfiction and fiction living in East Texas. She is the author of several published mini-articles and is currently writing a Young Adult Science Fiction series, *Chronicles of Mathias*, (www.amazon.com/Chronicles-Mathias-One-Reptilian-Rebirth/dp/1598249002) Volume One and Two are available on Amazon.

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Wally Wang's Apple Farm

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“Apple Moves Into Corporations” by Wally Wang

Clorox's IT team forced employees to use Windows and Blackberries, but now Apple is being offered as an alternative; Microsoft wants to surpass Apple retail stores; the ExoPC Slate vs. the iPad; the iPad in kindergarten; looking backwards; still waiting for flawless Flash performance; the future of books; how to view open windows as thumbnail images in Mac OS X.

As little as a year ago, Clorox forced their workers (www.computerworld.com/s/article/9215598/Clorox_cleans_out_BlackBerries_in_favor_of_iPhones_Android_devices) to use Windows 2000 PCs and Blackberry phones. Not surprisingly, Clorox's CIO Ralph Loura stated that, "Employee satisfaction with the IT team was not great."

The first question to ask is why did Clorox's IT team stick with Windows 2000 for so long? Was the IT team earnestly trying to provide the company's workers with the best tools available, or were they simply standardizing on ancient technology because the IT team wanted to make their own jobs easier while ignoring the needs of everyone else?

Clorox has since replaced 6,000 desktop PCs with Hewlett-Packard laptops (probably running Windows 7) and dumped the corporate-issued Blackberries by giving workers a choice of iPhones, Android phones, or Windows Phone 7 phones. Out of 2,000 new smartphones, 92 percent of Clorox employees chose the iPhone, 6 percent chose an Android phone, and 2 percent chose a Windows Phone 7 phone.

When you give people a real choice, it's suddenly clear what's actually desirable. Rather than try to force people into specific products or use lies and misinformation to "convince" people to avoid looking at one product in favor of another, what would happen if everyone simply looked at their technology options objectively?

Chances are good that if you give people a choice with all the facts in front of them, they can choose the product that meets their needs and makes them happiest, and this is exactly the horrifying, worse-case, disastrous scenario that so many technology "experts" will do anything to avoid.

Anyone want to hire the top decision makers of the Clorox IT team who forced the company to standardize on Windows 2000 PCs and Blackberry phones? Chances are good that if you don't want people to honestly evaluate their options and choose for themselves, you'll find that the people on Clorox's old IT team will probably think exactly the same as you do.

Microsoft Wants to Surpass Apple Retail Stores

Here's a riddle. If you have eight stores where most of them aren't making money, is it logical to open another 300 stores following the same business model where there's a high probability that most of these additional 300 stores also won't make any money?

If this sounds completely illogical, this is the latest news coming from Microsoft (www.businessinsider.com/microsoft-debates-whether-to-open-more-stores-2011-4) where Microsoft's CEO, Steve Ballmer, and COO, Kevin Turner, want Microsoft to surpass the number of Apple Stores in the world.

Business Insider states that the only reason Microsoft hasn't opened more retail stores is because "the stores are expensive to build—Microsoft wants them to be high-profile showcases like Apple stores are—and most of them aren't making money."

Why does Microsoft think that copying Apple's stores and putting Microsoft Stores in identical high-rent shopping malls will translate into success when that strategy hasn't worked yet? When Apple sells a product in their stores, they keep all of the profits. When Microsoft sells a low-priced item in their stores, they earn less profit because they have to first purchase the product from another company such as Sony, Hewlett-Packard, or Samsung, so they get less than 100 percent of the profit on a lower priced item to pay for a high-rent storefront.

In the Fashion Valley shopping mall in San Diego, you can buy an iPhone at the Apple Store for \$199 or \$299. At the Microsoft Store in the same shopping mall, you can buy a Samsung Windows Phone 7 phone for \$49. How does Microsoft expect to sell fewer, less popular, lower priced items and still afford the monthly rent in the same high-end shopping mall?

Microsoft even went so far as to hire former Apple Store employees who had high sales records. Apparently Microsoft figured if they lured all of Apple's highest product sales people to work in their stores, these sales people could sell an equal amount of Microsoft products out of the Microsoft Stores. This may seem logical until you realize that more people want to buy Apple products (iPads, iPhones, MacBook Airs, etc.) and fewer people want to buy comparable Microsoft products (ExoPC tablets, Windows Phone 7 phones, Samsung laptops, etc.).

Take the top selling Rolls Royce sales person, make that person sell cheap Yugo cars, and can you expect the same sales results and profit? Microsoft thinks so, which is why they believe opening more Microsoft Stores is the entire answer to competing against Apple.

For more convoluted logic from Microsoft, read this article from the San Francisco Chronicle (www.sfgate.com/cgi-bin/article.cgi?f=/g/a/2011/04/02/businessinsider-microsoft-had-to-make-windows-the-center-of-its-tablet-strategy-even-if-it-kills-them-2011-4.DTL) that explains why Steve Ballmer had no choice but to push Windows for Microsoft's tablet strategy.

According to this article, Steve Ballmer had to protect the profitable Windows market, which produces the bulk of Microsoft's profits every year along with Microsoft Office. If Microsoft promoted Windows Phone 7 for tablets, that would threaten the sales of Windows, so by promoting Windows for tablets, Microsoft can continue raking in high profits from Windows, even if putting Windows on tablets winds up causing Microsoft to miss out on the tablet market while

the tablet market kills sales of PCs, which lowers overall sales of Windows, thereby resulting in less profit from Windows, which is exactly the situation Steve Ballmer wanted to avoid by promoting Windows over Windows Phone 7 for tablets.

Confused yet? Rather than provide the best technology for their customers, Microsoft is more concerned about protecting the profitability of Windows and Office. By focusing too much on profits, Microsoft risks ignoring what's best for their customers. By focusing on satisfying customers, Apple increases their chance of gaining loyal customers that will fuel future growth. Can anyone guess which strategy will result in greater profits and market share in the long run?

The ExoPC Slate vs. the iPad

Whenever I need to buy something at the nearby Apple Store, I always like wandering a few stores down to visit the Microsoft Store in the same shopping mall. The contrast between the two stores is always the same.

Where crowds of people are always jammed in the Apple Store, the only crowds of people you see in the Microsoft Store are the employees standing around, waiting for someone to show up. During the Christmas shopping season, the Microsoft Store dedicated an entire table to showcasing Windows Phone 7 phones. The last time I checked, they reduced this display to showing three Windows Phone 7 phones.

If you've never seen a Windows Phone 7 phone in actual use, try one at a Microsoft Store and see what you think. The highly promoted tile interface works as advertised, so you can decide for yourself whether it offers any dramatic advantage over an iPhone or Android phone.

You can also find the original Microsoft Surface table device to play with, although the second version of the Microsoft Surface doesn't seem to be on display. More curiously is that the Microsoft Store is now selling the ExoPC Slate, a Windows 7 tablet.

At 2.2 pounds (the iPad 2 weighs 1.33 pounds) and a battery life of 4 hours (the iPad's battery life is 10 hours), the ExoPC Slate's only real "advantage" is its ability to run Windows 7 on a tablet. While using Microsoft Word 2010 on the ExoPC, its virtual keyboard popped up, just like an iPad, and that's where I noticed the biggest difference.

The iPad's virtual keyboard follows a minimalist design that displays only the keys you're most likely to need such as the letter keys. To type numbers or symbols, you need to switch to a different virtual keyboard, which can be a pain at times, especially when you want to type an apostrophe on a regular basis.

The ExoPC Slate's virtual keyboard follows the "dump everything on the screen at once" model where practically every key you'll need is displayed. This makes typing different characters easy, but also makes each key smaller and harder to hit by cluttering the screen with keys you may never need.

Curiously, the Microsoft Store advertises the ExoPC Slate (www.microsoftstore.com/store/msstore/en_US/pd/productID.225671700) with two options priced identically, a Microsoft Signature and a Microsoft Signature Premium option. The Microsoft Signature Premium option gives you everything the Microsoft Signature option does, plus an entire year of technical support

and the LoJack anti-theft program. For the same price, why would anyone choose Microsoft Signature when you can get the better Microsoft Signature Premium option without spending anything extra?

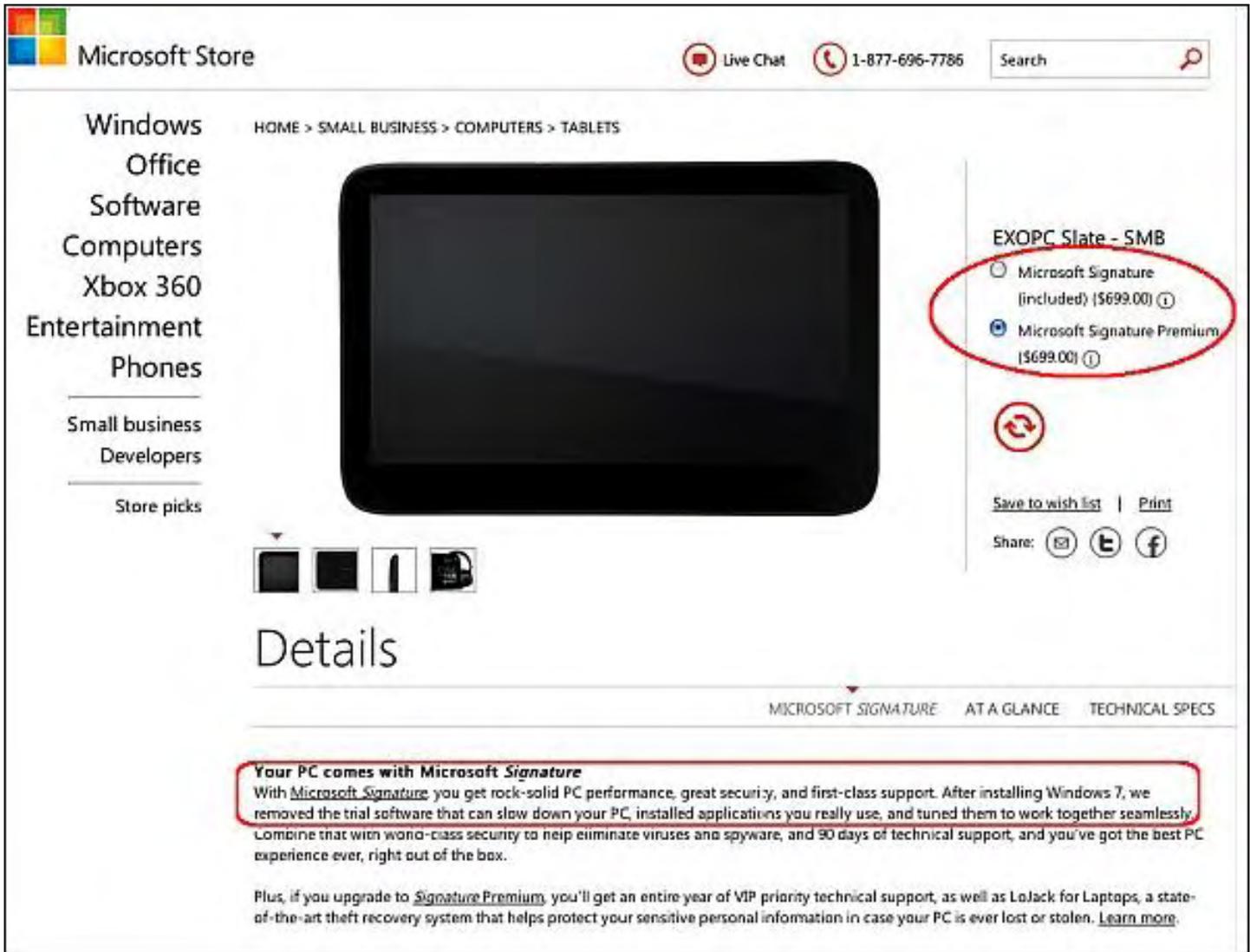


Figure 1. Microsoft's confusing advertising of the ExoPC Slate.

Another puzzling feature is what the Microsoft Signature option gives you, which is where the Microsoft Store has "removed the trial software that can slow down your PC, installed applications you really use, and tuned them to work together seamlessly."

This implies that computers that do not come with the Microsoft Signature option (PCs you purchase anywhere else) will likely come loaded with trial software (that can slow down your PC), pre-loaded with applications you probably don't want or need, and is not tuned efficiently to work together seamlessly. Why would any store sell any product already crippled to give you a less than optimal user experience? Yet this is the "normal" state of PCs sold every day to unsuspecting consumers.

Try this experiment. Take a brand new Windows PC and load the Glary Utilities (www.glaryutilities.com/) on it to clean up the registry. Even on a brand new Windows PC, the Glary Utilities will likely find Windows registry problems. In fact, just installing an updated version of the

Glary Utilities causes registry errors.



Figure 2. Installing the Glary Utilities causes Windows registry errors.

Use the Glary Utilities to fix all Windows registry errors, load Microsoft Office 2010 on this same brand new Windows 7 computer, and then run the Glary Utilities once more. The Glary Utilities will find even more Windows registry errors that were directly caused by the installation of Microsoft Office.

This poses several questions. First, can the Glary Utilities be trusted to accurately identify Windows registry errors? If not, try another Windows registry optimizing program of your choice and you'll likely see similar results.

Second, are these Windows registry errors even important? Third, and most importantly, why do new Windows PCs have any Windows registry errors at all (assuming that the Glary Utilities is accurate) and why does installing Microsoft Office on a new Windows 7 PC immediately cause Windows registry errors before anyone can even touch that computer?

Knowing that Windows 7 can get registry errors simply by installing a new program, the next question is how much of an advantage is there in running ordinary Windows programs on a tablet when you also need to run a Windows registry cleaner and an antivirus/anti-spyware program to keep Windows 7 working correctly?

To make the ExoPC Slate more finger-friendly on a tablet form, the ExoPC includes its own user interface layer rather than relying solely on the touch capabilities of Windows 7. Since the ExoPC runs Windows 7, you can run any Windows programs on it, although how well those programs will respond to the ExoPC touch interface remains a question that can only be answered by actually installing a Windows program that you need and seeing for yourself how well the ExoPC lets you run that program.

With so many minor problems, numerous questions, and confusing buyer choices (get Microsoft Signature with your ExoPC for \$699 or get the better Microsoft Signature Premium with your ExoPC for \$699), Microsoft simply makes buying any Windows computer more confusing than it should be, and then they wonder why their Microsoft Stores don't seem to be making any money. Is it really that difficult to pinpoint (and fix) at least one problem that makes Windows PCs more troublesome than Macs?

The iPad in Kindergarten

In Auburn, Maine, schools are debating on whether to give kindergartners free iPads (*new. bangordailynews.com/2011/04/07/news/ipads-for-kindergartners-idea-met-with-both-approval-and-cost-questions/*). Natasha Landry, whose daughter attends Washburn Elementary School, claimed that "It makes it easier for teachers to teach a larger group of kids, one on one, without having more teachers. It probably would take four teachers to do what the computers can do with one teacher."

While parents and taxpayers debate on whether they should spend money on iPads or allocate the funds for other needs, Ron Potvin, of the Auburn Small Property Taxpayers Association, does agree that young people seem to instantly understand and take advantage of technology. "You look at kids today, they do stuff I never did. There would be value in it."

If you think technology can't help kids learn, then you might be interested in *Mindstorms: Children, Computers, and Powerful Ideas* (www.amazon.com/gp/product/0465046746/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0465046746), a book written by Seymour Papert way back before the age of personal computers.

In his book, Dr. Seymour Papert used the LOGO programming language to teach kids how to think creatively and solve problems using the computer as a learning environment. Dr. Papert's main theory is that kids learn best through hands-on learning where they can freely experiment and try different options without fear of failure.

Whether you agree that giving kindergartners free iPads is a wise use of education funds, there's no doubt that kids love playing with the iPad and that playing with the iPad can teach children useful skills.

With textbooks costing so much while offering minimal improvements between editions, the iPad can actually save schools money by eliminating the cost of bulky, soon-to-be-outdated textbooks. Replace textbooks with iPads (*blogs.ajc.com/political-insider-jim-galloway/2011/02/01/tommie-williams-state-considering-ipads-for-students/?cxntfid=blogs_political_insider_jim_galloway*) and textbook publishers will wither away.

For a real test of the iPad's effectiveness, someone should give a bunch of kindergartners an iPad and then give another bunch of kindergartners a Dell Streak, Samsung Galaxy Tab, or Motorola Xoom. Then see which device proves more effective in encouraging children to explore and teach themselves.

Looking Backwards

Initially, critics dismissed the iPad as useless. Then as Apple cheerfully sold 14 million iPads in less than a year, such critics suddenly decided that tablets could be useful after all, but only if they weren't made by Apple. However with Motorola's Xoom (www.financialfeed.net/ipad-still-the-top-tablet-after-disappointing-motorola-xoom-sales/852802/) only selling an estimated 100,000 units (while Apple sold 300,000 to 400,000 iPad 2s on the first day), critics may need to change their minds once more.

Are tablets useful or is it just the iPad that's useful? With so many companies trying to match the iPad, there's been a constant stream of products that arrive with great fanfare and quietly fade away like the HP Slate, Samsung Galaxy Tab, Dell Streak and Motorola Xoom. Next up are the HP TouchPad and the Research in Motion Playbook. After so many tablets have failed to captivate the public, despite so-called "advantages" like Flash support, USB ports and replaceable batteries, perhaps it's finally time to admit that technical specifications are less important than actually being able to do something.

Forbes recently published an article that highlights the differences (blogs.forbes.com/adamhartung/2011/04/08/apple-is-better-managed-than-microsoft/) between Apple's incredible growth and Microsoft's relative stagnation. First, there's the question of research and development expenditure. According to Silicon Valley Insider, Microsoft spent almost eight times as much in research and development as Apple in 2009, yet for all that money spent, what does Microsoft have to show for their efforts?

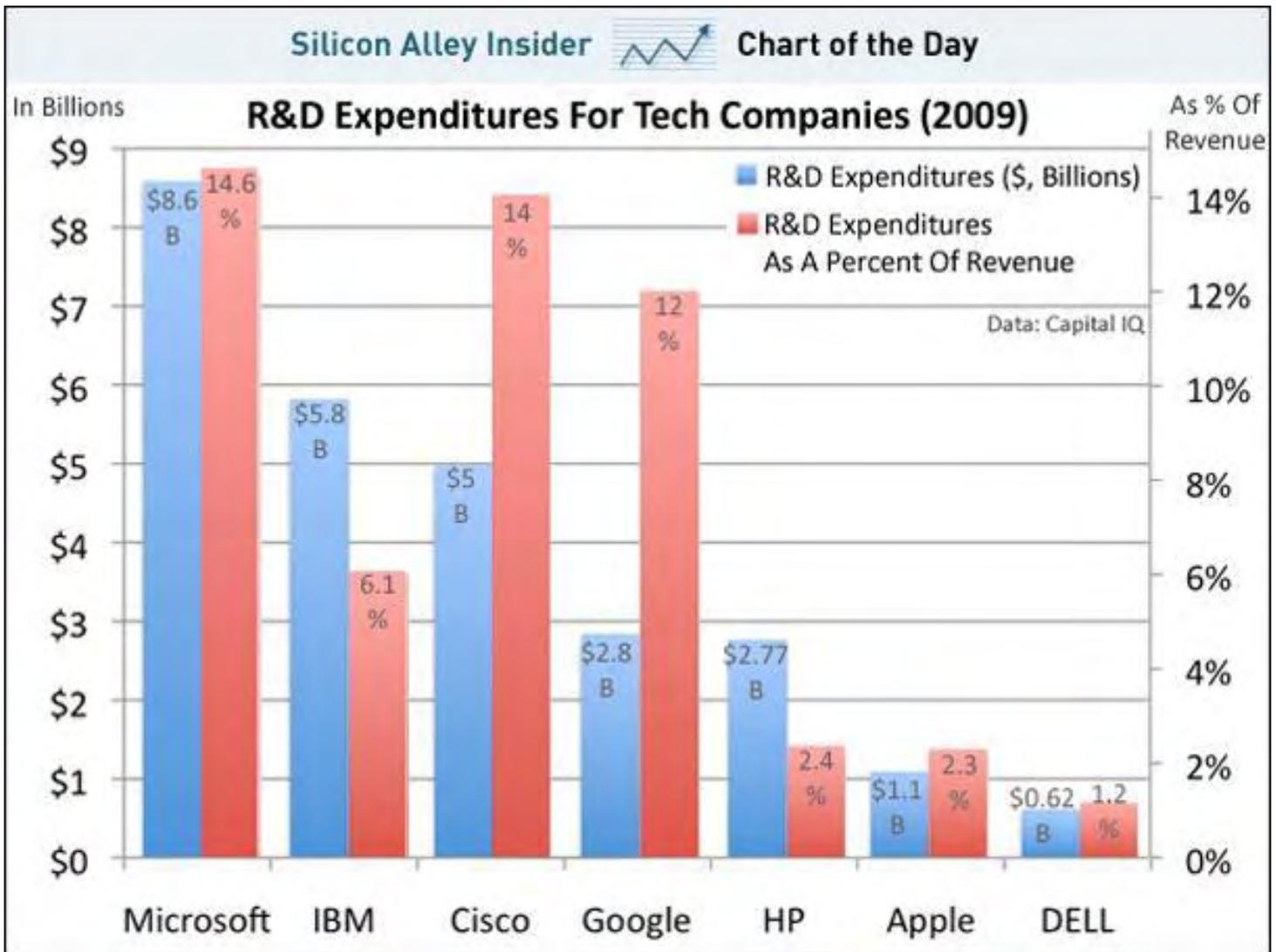


Figure 3. Research and development expenditures of various companies.

As recently as 2008, Microsoft actually led the smartphone market. Now with Windows Mobile 6.5 officially declared dead and Windows Phone 7 unable to regain lost market share, Microsoft's smartphone share continues plummeting.

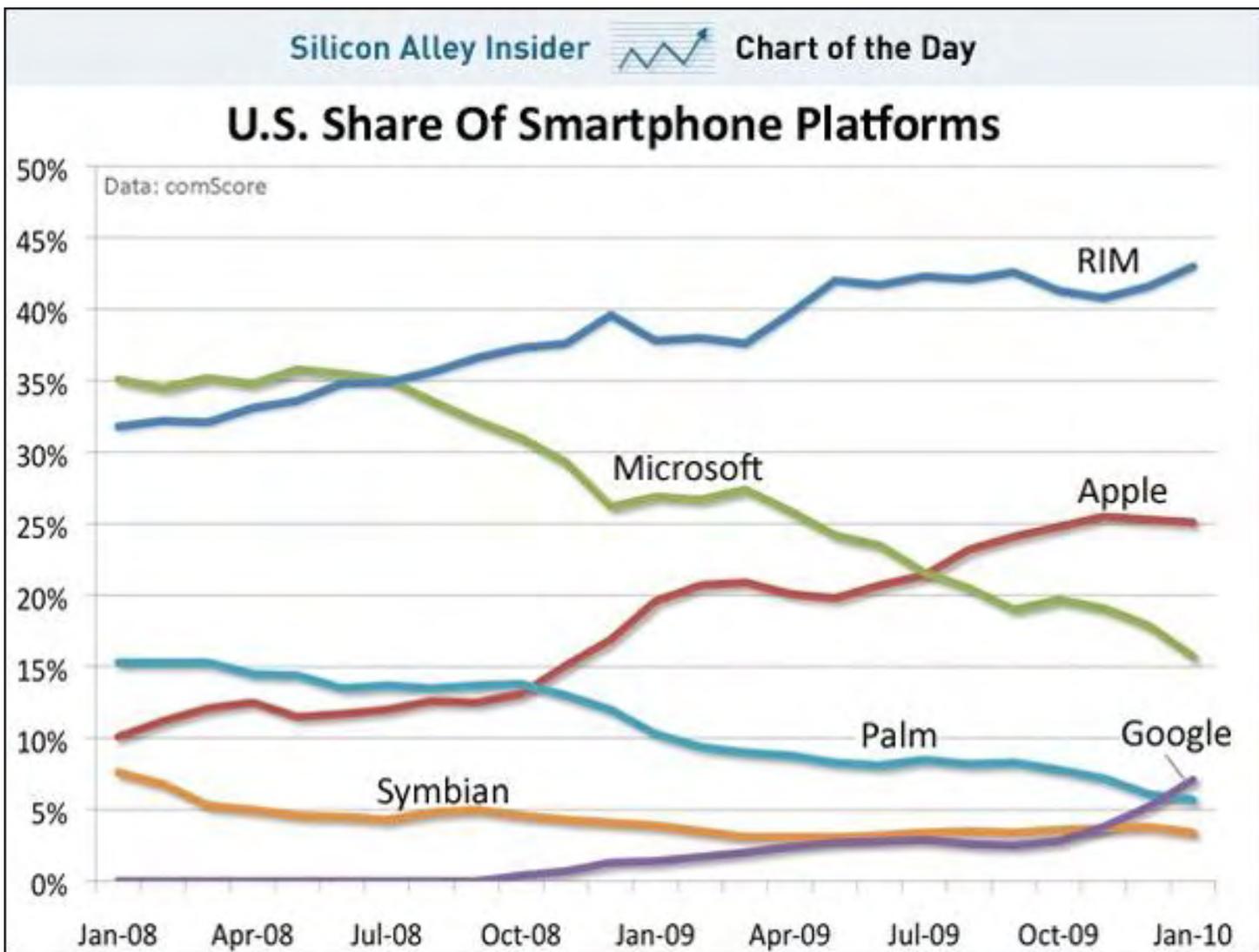


Figure 4. Microsoft has lost their smartphone lead.

Forbes concludes that while Apple looks for new markets to continue growing (smartphones and tablets), Microsoft keeps looking backwards to protect their Windows and Office cash cows at the sacrifice of investing in new markets like smartphones and tablets. Watching Microsoft protect Windows at the expense of investing in tablets is like watching Kodak trying to protect their film processing business at the expense of investing in digital photography.

PC World even claims that iPad sales are killing laptop sales (www.pcworld.com/article/224628/apple_ipad_hammering_laptop_sales_analysts_say.html#tk.rss_main), although they should qualify this by stating that Apple keeps selling more Macintosh laptops every quarter, so the only laptops that the iPad is really hurting are Windows laptops (news.cnet.com/8301-1035_3-20052474-94.html?tag=cnetRiver).

Tablets at least partially responsible for notebook growth deceleration since February '10

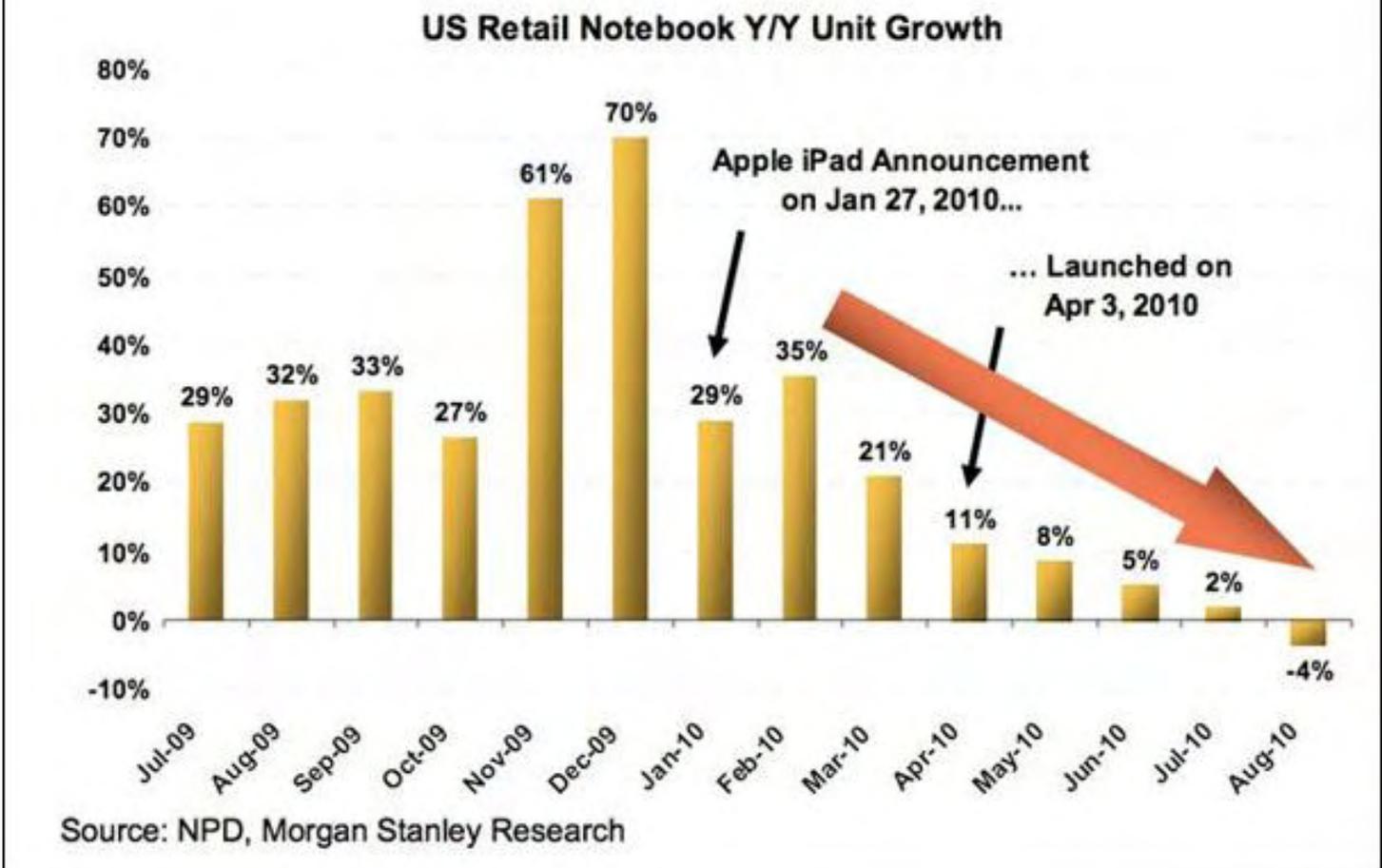


Figure 5. Laptop sales continue falling due to the iPad.

With all the money Microsoft keeps spending (and wasting) to protect Windows, how much longer can Microsoft ignore the reality that most people don't want Windows on every computer, smartphone and tablet on the planet? More importantly, how much longer can even die-hard Microsoft supporters avoid dealing with the reality that Microsoft's better days are fast receding behind them?

Android vs. Apple

In the tablet market, Android is still struggling to develop a competitive tablet. In the smartphone market, Android continues growing, although Verizon's recent emphasis on the iPhone might slow down Android's growth. While Android is roughly equivalent to the iPhone, the Android Gripes site has noticed that apps from the same developer can look dramatically different (android-gripes.tumblr.com/post/4409289546/why-do-apps-from-the-same-company-look-worse-on-android) on the iPhone and Android.



Figure 6. Comparing identical apps on Android and the iPhone.

Why should identical apps, from the same developer, look so much better on the iPhone than on Android? The Android Gripes site asks, "Is it because iPhone developers are better at user interface design? Is it because the iPhone development environment is better than the Android's? Is it because iPhone users care more about user interface? Or is it because Android itself implants the ignorance of beauty, usability and focus on details into the community at the first place?"

Still Waiting for Flawless Flash Performance

One supposed drawback of the iPhone and iPad is its inability to run Flash. Yet rival smartphone and tablet makers have been promoting Flash support in their products for years without much success. International Business Times (www.ibtimes.com/articles/131993/20110408/flash-adobe-rim-playbook-motorola-xoom-apple-ipad.htm) reports that "Samsung, the first to ship a product with Flash support in the Galaxy Tab late last year, had been beset with complaints of flash video not playing smoothly, and even cutting battery life significantly."

Motorola heavily promoted Flash as its major advantage over the iPad. Yet when Motorola initially launched Xoom, it lacked Flash support. Now Research in Motion has reportedly delayed the launch of its Playbook tablet to wait for Flash support. To compete against the iPad and iPhone, rivals rely on uneven and uncertain support for Flash rather than offering any features that they can control directly.

As the International Business Times article clearly states, the problem isn't that Apple is arbitrarily banning Flash, but that Flash overtaxes the processing power of mobile devices, making it

difficult for Flash to run flawlessly on any smartphone or tablet. To see Flash's uneven performance on a Xoom, watch this video (douknowhowto.com/know-tablets/motorola-xoom-flash-performance-031211-the-truth/), especially at the 12:45 minute mark where the user either has problems with Flash or with the Xoom's touch screen itself.

The user of this video has turned Flash off to prevent ads from appearing, which also has the benefit of preventing Flash ads from bogging down the Web browsing experience by taking time to load. This option to turn Flash off gives people a choice, much like using the Click to Flash (clicktoflash.com/) program for Mac OS X, but also reveals the double-edged nature of Flash's usefulness for displaying interesting content and annoying advertisements.

If you don't mind unpredictable, choppy performance, then you might be happy with the ability to run Flash on a tablet. If waiting and wrestling with your computer isn't your idea of fun, then you might want to compare a Xoom (or any rival tablet device) with a iPad and see which one really feels easier to use with and without Flash.

The Future of Books

At one time, many families owned a set of encyclopedias. Nowadays, everyone can find the latest information just by searching the Internet. If you still want an encyclopedia, consider spending over \$1,000 for a World Book Encyclopedia, Dictionary and Atlas (www.worldbook.com/all_products/advanced_research_package_2011/flypage.tpl.html).

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- The articles are written in a clear, direct style, starting with relatively basic information, advancing in depth as they progress.
- World Book revision rates make it the most current and up-to-date encyclopedia available.

The World Book Dictionary and The Atlas of the World:

- The World Book Dictionary was developed by experts to be clear, informative, and easy to understand. It features more than 225,000 entries, 3,000 illustrations, notes on how to use prefixes, suffixes, capitalization and punctuation, pronunciation guides, and more.
- The Atlas of the World is a 432-page atlas that has been newly redesigned, expanded, and updated, this comprehensive, engaging atlas features detailed full-color physical and political maps to capture students' attention.

Figure 7. A World Book reference set can be yours for one low price.

For your \$1,000 investment, you get a bulky set of books that take up space, weigh a lot, offers incomplete information, and has already gone rapidly out of date since it was printed. Want information about the Japanese tsunami and nuclear power plant crisis? You won't find it in the latest World Book Encyclopedia.

For the same \$1,000 investment, you could buy a laptop computer and access current, more extensive information over the Internet. Compared to the versatility of a laptop computer, does anyone think that a World Book Encyclopedia is a better investment? When even the slimmest printed book starts costing \$100 or more a copy, how many people will still think printed books are better than e-books?

* * *

Press the F9 function key in Mac OS X and all your open windows now appear as thumbnail images in a feature called Exposé. Now you can click on a thumbnail image to jump to that particular window.

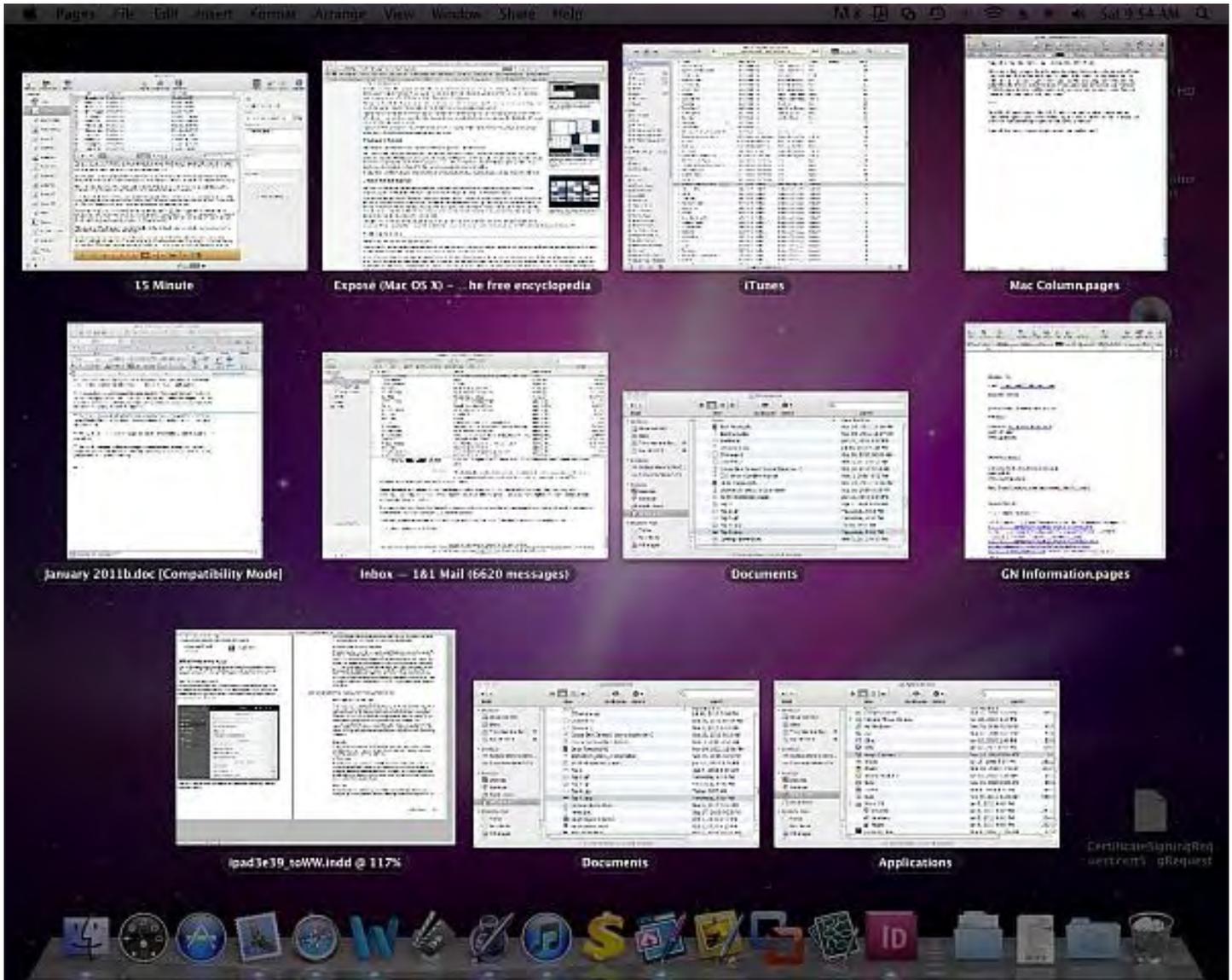


Figure 8. Exposé displays open windows as thumbnail images.

To scroll through your thumbnail images, just press the Tab key, or to scroll backwards, press the tilde (`) key. This lets you view each thumbnail image by itself so you can get a better view of what each window contains.

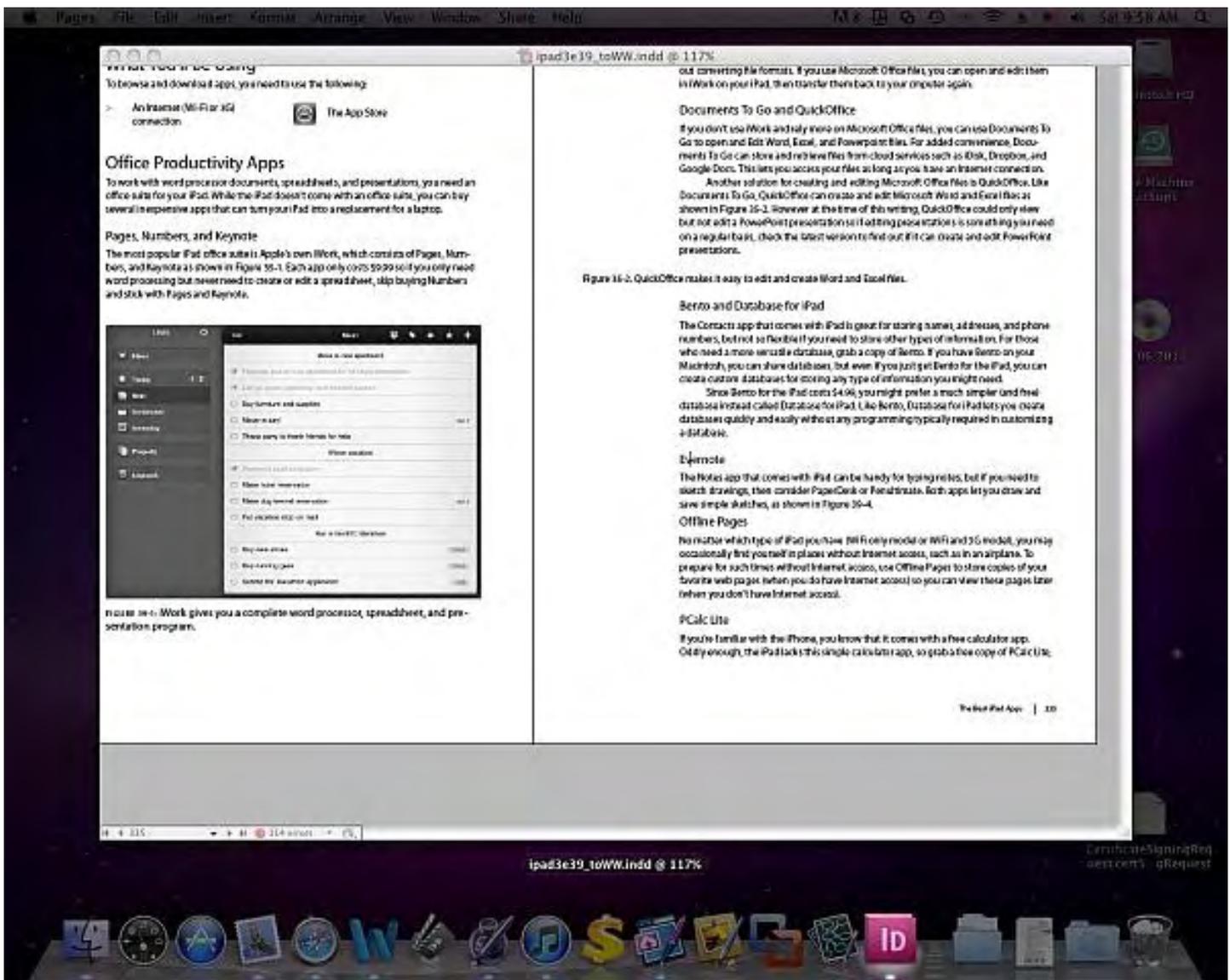


Figure 9. Pressing Tab or the tilde (~, no shift) key lets you view each thumbnail image individually.

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 (www.amazon.com/gp/product/1593271646?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593271646),

My New iPhone (www.amazon.com/gp/product/1593271956?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593271956),

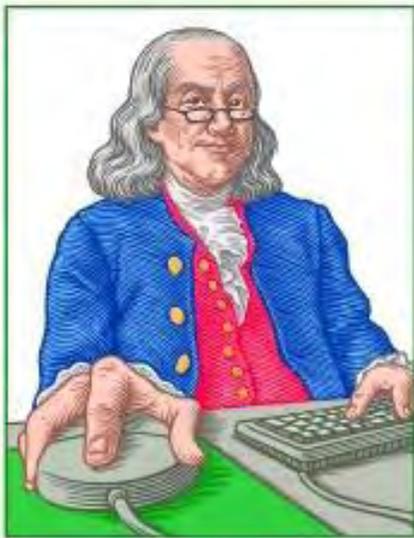
My New iPad (www.amazon.com/gp/product/1593272758?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593272758),

Steal This Computer Book 4.0 (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)

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 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 Fisher and Gerald Fisher (www.amazon.com/gp/product/1590791894?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1590791894),
How to Live With a Cat (When You Really Don't Want To) (www.smashwords.com/books/view/18896).
Mac Programming For Absolute Beginners (www.amazon.com/gp/product/1430233362?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1430233362)
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/) along with blogging about electronic publishing and how authors can take advantage of technology at his site "The Electronic Author." (www.wallacewang.com) Wally can be reached at wally@computoredge.com.

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LINUX LESSONS

**"AN INVESTMENT
IN LINUX KNOWLEDGE
PAYS THE BEST
INTEREST."**

Linux Lessons: Tips and Tricks from Users

"DO Shell File" by Tony
J. Podrasky

Tony shares a simple Linux shell file for "DO"ing anything, explaining how each line works.

Hello Linux fans!

Jack Dunning, the editor, and I have been sharing ideas as to how we can make this column more interesting to you, the reader. One idea was for me to document the shell file, explaining what each command does. So, starting with this week's shell file, I'll explain how each line works. For many of the commands, you can do a `<man [whatever you are interested in]>` and if there is a "man page" (manual) the system will give you more information. Additionally, the system has a utility called "apropos" that will find related information to what you asked for.

Try typing this in: `<apropos sleep>`. The system will list several utilities that have to do with system delays. Another idea was to ask you, the reader, for suggestions. If you have an idea for a shell file, send it to me and I'll see what I can do. My e-mail is hunybuny@netzero.net. I check it several times a week, so any e-mail sent to me should be answered in a few day's time. Here's this week's shell file.

Filename: DO

Use: To continually repeat a set of commands.

Invocation: `root% <DO [whatever command you want to repeat]>`

Example: `root% <DO ls -la *.jpg>`

[System's Response]

```
-rw-r--r--  1 tonyp      users      125645 Mar 10 07:25 1407_d0.jpg
-rw-r--r--  1 tonyp      users       42036 Mar 10 07:23 1407_d1.jpg
```

(You see all the files in my current directory that have the suffix of .jpg on them).

This simple shell file comes in handy if you are doing something like a huge FTP transfer and

want to watch the size of the file. It contains only 4 commands, so it is not bullet-proof. In other words, it may not work for some of the things you want to do.

How it works:

<while true> takes the command "while" and its argument "true". "true" is always a "true condition" and never changes. So this means that the "while" command will run indefinitely. In the near future we'll see how replacing "true" with a variable will allow the "while" loop to terminate.

<do> tells the system to execute the commands until it hits the <done>. When the system reaches the "done", it goes back to the "while" and tests for a change in the condition of the argument (which, since we have it set to "true", will never exit from this loop, which means we need to use CTRL+C to stop the loop, which is easier than some of the other techniques).

<clear> says to clear the screen of text and put the cursor at the top. You can open an xsession (some might call it a "window") and type the word <clear> at the prompt. If you don't like that feature in the "DO" shell file, just delete that line.

<\$1 \$2 \$3 \$4 \$5 \$6> are the commands given to "DO". DO will take up to 6 variables. In the above example, I provided DO with three variables: ls, -la, *.jpg.

<sleep 5>. This tells the system to pause for 5 seconds during the execution of the "while loop". You can edit the time to be whatever you like: 60 will pause the DO command for one minute, etc.

-----CUT HERE-----

```
while true
do
    clear
    $1 $2 $3 $4 $5 $6
    sleep 5
done
```

-----CUT HERE-----

Instructions: save the commands between the two "CUT HERE" lines in a file called "DO". Do a <chmod 755 DO> to make it executable. To see how it works, Do a <DO ls>.

Tony has been in the computer field since 1976 when he started working for Data General Corp as a field engineer. Later going on to design hardware interfaces, write patches for operating systems, and build networks. It was in 1995 while working with the military on several projects that he ran into a "spook" who showed him a laptop that ran a then-unknown O/S called "Linux." "A laptop running a form of UNIX tony = a marriage made in heaven!" Tony can be reached for questions at Linux Questions for Tony (hunybuny@netzero.net).

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Worldwide News & Product Reviews

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



Spring Cleaning Applies to Computers, Too; Peratech's Revolutionary Touch Screen Technology; Toshiba NB305-N600 Netbook; FIFA 11 for PC; Magic Charger—One Less Brick in Your Bag.

Spring Cleaning Applies to Computers, Too

Crucial.com has these annual (if not more frequent) cleaning tips for computer users:

It's that time of year again, when we give the house a good spring cleaning in time for the summer ahead. Computers are an important part of your home, so at *Crucial.com* we want to remind you to not forget your desktop or laptop in your spring time clean up.

Your computer has several elements which should be included in the spring clean, on both the outside and inside. The following is a step-by-step guide that should help.

Exterior:

1. Remove any disks in the drives to prevent scratching. Shut down the computer (to avoid accidental keyboard/mouse commands). Remove the power cord from the plug. Once the plug has been removed, press the "Power" button to discharge the power. Move the computer to an area where you won't mind making a mess. Choose a static-free area with a smooth surface like a dining table or finished workbench – do not place the computer on carpet or other static-heavy textile.
2. Using a can of compressed air, blow out the keyboard, connections at the rear of the computer case, and any hard-to-reach areas like monitor edges.
3. Using a mild soap/water or ammonia solution, wipe down the surfaces of the computer case, keyboard, mouse, and monitor back only. Be sure to spray the solution on a lint-free cloth rather than directly onto the surface.
4. Wipe down the monitor with display-friendly glass cleaner.

Interior:

1. (See step #1 in the "Exterior" section for detailed instructions on shutting down the computer.)
2. Open the case by sliding off the side panel, or following the instructions in your owner's manual.
3. Using a can of compressed air, blow out the fans, other moving parts, and lastly the entire inside of the case. One key tip when using the compressed air is to remember that you want to

remove the dust rather than displace it. The simple step of turning the case on its side will help with this.

4. While the case is open, this also gives you a the chance to see if any memory slots are free for upgrading, providing a great opportunity to not only clean up your PC for the year ahead, but to speed it up too. You can run the Crucial System Scanner here to find out which 100% guaranteed compatible modules will compliment your sparking clean computer.

For additional tips & tricks, checkout Crucial's YouTube channel (www.youtube.com/crucialmemory).

Peratech's Revolutionary Touch Screen Technology

Peratech (www.peratech.com) writes in this week with info about their QTC Clear Touch screen technology, which they say will revolutionize touch screens:

Peratech has developed a see-through version of their award-winning, Quantum Tunnelling Composite (QTC) material called QTC Clear. This force sensing material can be used to create a whole new class of force sensitive touch screens that can completely replace current resistive touch screen technologies or enhance capacitive ones to create superior solutions with more features such as 3D input.

"Both resistive and capacitive touch screen technologies have their drawbacks," explained Philip Taysom, Peratech's Joint CEO. "Resistive is not very accurate and can't do multi-touch so it is becoming less popular than capacitive, but the latter uses a lot of power constraining it to smaller screen sizes. Our new, QTC Clear Touch screen design offers the best of both technologies without their drawbacks. It can be made in any size and provides multi-touch, high sensitivity with great accuracy, ultra low power consumption and additional intuitive features with the third dimension of pressure to more easily manipulate and control information on the screen."

Resistive touch screen manufacturers can upgrade to using QTC Clear and use their existing manufacturing procedures and equipment to produce this new class of force sensitive touch screens. Capacitive touch screen manufacturers can augment with the addition of QTC Clear to provide additional features from the force sensitivity such as touch activation of the capacitive matrix to save power, 3D menus, variable line widths and more intuitive gaming interaction. Very little alteration is needed to the control electronics in either case except to take advantage of the new features.

Current resistive touch screens designs use a sandwich of a soft top layer and a hard bottom layer with small spacer bumps to keep them apart. When the soft top layer is pressed it deforms and contact is made between two thin films of conductive material (ITO) on the inside of the two structural layers. The drawbacks are that the top layer has to be soft enough to deform easily when pressed which makes it vulnerable to damage by scratching etc. and it cannot be used to provide the increasing important multi-touch functionality. No current flows unless pressure is applied, they can be made any size, and can be used with gloves and in any humidity conditions.

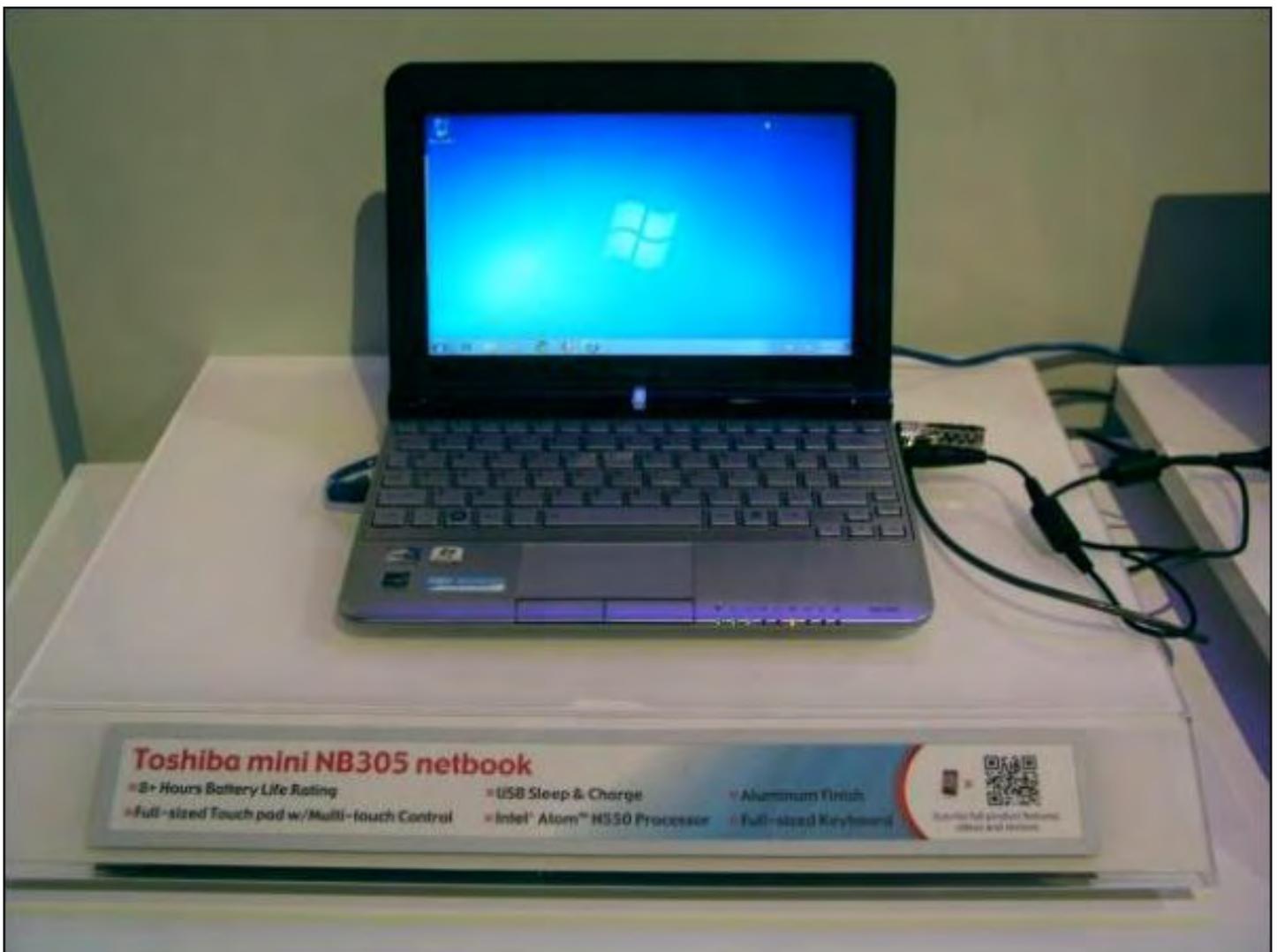
Capacitive touch screens have become more popular as they overcome the drawbacks of resistive because they have a robust, hard top surface and provide multi-touch. However, the design uses a lot of current to provide the touch detection which is a constraint on screen size

and potential interference issues that require careful design to overcome, making large capacitive screen solutions expensive. Also gloves and high humidity prevent them from working.

QTCs are electro-active polymeric materials made from metallic or non-metallic filler particles combined in an elastomeric binder. These enable the action of touch to be translated into an electrical reaction, enabling a vast array of devices to incorporate very thin and highly robust sensing of touch and pressure. QTCs' unique properties enable it to be made into force sensitive switches of any shape or size. QTC switches and switch matrices can be screen printed allowing for development and integration of switches that are as thin as 75 microns. QTC technology has no moving parts and requires no air gap between contacts. This makes it extremely reliable and suitable for integration into the thinnest electronic designs and with industry leading operational life.

Toshiba NB305-N600 Netbook

One of the things I was looking for at the Consumer Electronics Show this year was a replacement for my old faithful netbook, "Aspy," an Acer Aspire One.



"Aspy" came with a solid state hard drive, but it was only 8GB in size, and even with a 16GB SD card I used as a D drive, over time it was bogging down no matter how I tried to clean it up. After

looking around at the netbooks at the show, I came home and purchased "Toshee," a Toshiba NB305-N600. It came with a Intel Atom N550 processor, 1GB of DDR3 memory which I upgraded to 2GB, a 10.1" WSVGA TrueBrite display (1024x600), up to 250MB shared graphics memory, and a 250GB hard drive. Ports include 3 USB 2.0, one of which features "Sleep and Charge, 10/100 LAN, SD card slot, mike and speaker jacks, and AC adapter jack. It has a built in camera and microphone, speakers and a 6-cell Li-ion battery with up to 8 hour battery life. It weighs 2.6 lbs.

Software includes Windows 7 Starter (32bit), Microsoft Office Starter, Microsoft Silverlight, Microsoft Windows Live Essentials including Photo Gallery, Messenger, Mail, Writer and Movie Maker. There are also numerous Toshiba applications and a 30-day trial Norton Internet Security 2011.

Setup was easy. I made a set of recovery and repair DVDs/CDs. The hard disk also has a hidden partition with the recovery files so there are several ways to recover.

The weakest feature of the unit is the speakers. At peak volume they would really be hard to hear in an area with any amount of background noise. However, when you plug in a headset, it is another matter. You can get all the volume you need.



I took it on a recent trip to Italy and it performed well. Since I listen to a lot of streaming old time radio on it from <http://otrnow.com> when I am over there, I brought a small Creative Labs speaker device (model NO-CSW5300) to improve the built-in speaker issue mentioned earlier. It runs on battery or an AC adapter. The adapter is 5VDC. I simply made a USB to power connector cable

and powered it from one of the netbook's USB ports. It worked quite well. On the other hand, my magicJack—which works flawlessly (24/7) on my Windows XP computer at home—gave me fits on the Windows 7 netbook. But that's for another time.

Back to Toshee, except for the internal speakers, it is a fine unit. It's a shame that they couldn't have done a better job on them. If one uses their netbook for music and videos, I would not recommend it because of the speaker issue. Though the speakers I used were small, it is still another piece of equipment one must take with them when traveling.

I'll be taking it on another Italian adventure this fall. If I get the magicJack issue resolved I will report on it then.



Review contributed by Joe Nuvolini

FIFA 11 for PC

EA Sports is back with their 2011 version of hot FIFA franchise, FIFA 11, and it really is better than ever.

New is the "Play as a Pro: Goalkeeper" game mode. In this mode, you're locked to a camera view behind the goal and you get to test your skills as a goalie. Throughout the entire game you control your team's goalie from a camera locked behind the goal. I must warn you though, it's possibly the most difficult thing you'll ever attempt, but nonetheless it is a lot of fun.



There is also the normal Play as a Pro mode, where you get to design your character and play with your favorite team from a third person point of view. Along with Play as a Pro mode is

Manager Mode where you can both control your player on the field and manage the team.

FIFA 2011's graphical updates provide for a stunning play experience. The crowds are a bit more realistic now; the players are starting to look frighteningly lifelike. Detail is so good you can nearly see individual blades of grass. Maybe they're saving that for 2012!



Gameplay improvements match the visual updates and is smoother than ever. The passing and shooting system seems a lot simpler than previous versions, so it's even easier for new players to pick up.

In my opinion, FIFA 2011 is a real treat for old school FIFA fans and new players alike.

FIFA 11 (www.ea.com/soccer/fifa) is available for all major consoles and PC for around \$60, and all handhelds for around \$40.



Review contributed by Jeremy Halligan

Magic Charger—One Less Brick in Your Bag

Wireless pointing devices are convenient and they can help reduce desktop clutter. However, one downside is that they need a source of electricity. Apple's Magic Mouse, for example, requires two AA batteries. Because drained batteries are truly awful for the environment (*en.wikipedia.org/wiki/Battery_recycling*), the fewer batteries that users send to the landfill, the better. The landfill's population of spent batteries can be minimized by using rechargeables instead of alkalines. Rechargeable batteries have their own downsides, though, one being that they require a charging brick that has its own pluses and minuses. An alternative to a charging brick for Magic Mouse owners is Mobeet Technology's Magic Charger (www.mobeetechnology.com/the-magic-charger.html) (MC).

What makes this product magical? MC's defining feature is its use of inductive charging (*en.wikipedia.org/wiki/Inductive_charging*), a process that relies upon an electromagnetic field rather than a power brick to recharge batteries. This process is accomplished through MC's base station which is a rounded rectangle-shaped unit (Figure 1) "made of recyclable materials" according to the product's data sheet (www.mobeetechnology.com/the-magic-charger.html). The base station is highly portable, measuring 4.64 x 2.55 x 0.35 inches and tipping the scale at a scant 1.94 ounces (more details in a moment).



Figure 1. Magic Charger (MC) has a low profile and its design complements Magic Mouse's (top). MC's upper surface is white polycarbonate (middle) and its underside has an aluminum-like finish (bottom).

In addition to the base station, MC's easy-to-open cardboard packaging includes a battery pack (1.3 ounces; Figure 2) and mini-USB cable (about 43 inches long). The battery pack is mandatory and substitutes for the 2 alkaline batteries that Apple includes in the Magic Mouse. To install the battery pack, the user must remove Magic Mouse's batteries and its battery compartment's dust cover, then insert MC's battery pack into the compartment. The installation process (www.mobeetechnology.com/support/faq/view-article/8-how-to-correctly-insert-the-battery-pack-into-my-

magic-mouse-.html) is illustrated and explained in one of the company's online FAQs that is recommended reading for prospective buyers.



Figure 2. Magic Charger's mandatory battery pack consists of two AA rechargeable batteries integrated with a replacement for Magic Mouse's dust cover (top). When the pack is installed properly (middle), the rodent's underside looks almost the same as before except it now is prepared for inductive recharging (bottom).

MC's battery pack has a rated lifespan of 500 recharge cycles, so it would be good for almost 10 years if you recharged it weekly. When the battery pack dies, a replacement (www.mobeetechnology.com/shop.html) costs \$29.90. This cost represents almost 60% of MC's \$49.90 MSRP, which includes a battery pack and the aforementioned mini-USB cable.

How is MC used? After installing the battery pack, only the following two steps remain:

- Connect MC's base station to a computer's USB port via the included USB cable.
- Put a Magic Mouse on top of the base station (Figure 1) and voilà!

Leaving a Magic Mouse on the connected base station for five to six hours (www.mobeetechnology.com/support/faq/view-article/3-how-long-will-it-take-to-recharge-.html) is sufficient to recharge the battery pack according to Mobe's FAQ. This works with the Mac awake or in sleep mode.

In my tests, the battery pack initially charged to a maximum of 68% (as indicated in Mac OS X's Mouse System Preference) after the recommended 6 hours of charging. Why 68% rather than 100%? This issue is addressed in another of the company's FAQ articles (www.mobeetechnology.com/support/faq/view-article/7-why-the-battery-level-displayed-in-osx-is-only-

70-to-80-after-several-hours-on-the-base-station-.html).

That's a normal behavior. The Alkaline batteries originally delivered with the Magic Mouse are 1.5V per cell, meaning 3V for the 2 cells when you use brand new batteries. We are using NiMH batteries, these are 1.2V per cell. Thus when fully charged that's 2.4V which means that OSX will read 70 to 80% only.

How long does a recharge last? According to the aforementioned data sheet, the battery pack is rated to power a Magic Mouse for up to 6 days. Your mileage may vary depending upon your usage model, however. My usage model included turning off Magic Mouse during periods of inactivity rather than having the rodent go into sleep mode. Under these conditions, a single charge lasted more than two weeks.

MC's most compelling strength probably is convenience. It eliminates the need for access to an electric outlet plus a charging brick, and its slender form-factor readily fits into a backpack's or carrying case's pocket. This could be a big plus for MacBook Pro/Air road warriors with layovers in airports. Another virtue is MC's ease of use. Its buttonless interface consists of a single LED that flashes green while charging the battery pack, displays static green when fully charged, or flashes red when the batteries have failed.

This product's reliance on USB power (www.mobeetechnology.com/support/faq/view-article/4-do-i-need-a-special-usb-port-to-recharge-.html) (drawing about 250 mA) rather than an electric outlet and charging brick is a convenience, but also could be a weakness. Because of this reliance, MC requires the user's Mac to be powered on (www.mobeetechnology.com/support/faq/view-article/5-can-i-charge-my-mouse-while-my-computer-is-off-.html). Consequently, during the battery pack's recharge, iMac and Mac Pro owners would need to employ another pointing device, rely solely on their keyboard, or interrupt their work. This potential weakness thankfully is not too serious because, as mentioned earlier, recharging could be done with the iMac or Mac Pro in sleep mode overnight or through other periods of inactivity.

Perhaps the most important potential weakness, however, is that MC supports only (www.mobeetechnology.com/support/faq/view-article/1-can-i-use-the-magic-charger-for-any-mouse-.html) Mobe's battery pack. If you've already purchased conventional AA rechargeable batteries, MC is not for you because MC won't recharge them.

Additional weaknesses that became apparent during my testing included the following:

- The package for this review did not include a printed user guide. Instead, scanty instruction illustrations (without any narrative) are printed on the inside of the package's lid and lack basic information such as whether the battery pack needs charging prior to first usage (it does) and whether Magic Mouse's power switch should be left on or off during charging (either way is OK according to customer service's reply to my query).
- In my testing, the battery pack was more troublesome to install properly than two conventional AA batteries. Figure 2 (middle) shows that the top end of the battery pack is inserted as the installation's first step (<http://www.mobeetechnology.com/support/faq/view-article/8-how-to-correctly-insert-the-battery-pack-into-my-magic-mouse-.html>). Next, the user presses down on the battery pack's built-in dust cover until it is flush with Magic Mouse's underside. Then the mouse's slider at the bottom of the compartment should click to secure the installation. In my

testing, however, the battery pack's fit was less precise than conventional batteries and Apple's dust cover. One day during testing, the battery pack somehow partially popped out of the compartment during travel in my backpack. Two people took almost half an hour to successfully extract the stuck battery pack and reinstall it. The reinstallation did not last long before this scenario played out again.

- Mac OS X's "Lost connection" graphic has displayed more frequently with MC's battery pack (typically once per day) than with conventional AA batteries (rarely, if at all) during this review. These bluetooth interruptions probably are attributable to the battery pack partially dislodging in the battery compartment.

In summary, MC could be a convenient alternative to a charging brick for Magic Mouse owners. The addition of a printed user guide, more detailed installation instructions than the ones on the package's lid, and a better-fitting battery pack might improve MC's potential to help reduce the landfill's population of alkaline batteries.



Review contributed by Barry Fass-Holmes

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

"A Little More Humor," "And Why Do We Need Any iPad?" "Reply to "Do you need a tablet computer?" "Auto Login Question," "Hard Drive Thrashing"

A Little More Humor

[Regarding the March 25 Beyond Personal Computing column:]

How does one identify a British made computer?
It leaks oil (remember older Brit cars).

Why do computer programmers confuse Halloween and Christmas?

Because:

OCT 31 = DEC 25 (OCTal — DECimal)

-Mr Andy

And Why Do We Need Any iPad?

[Regarding Jack Dunning's March 18 article, "iPad: A Walk in the Garden":]

Answer: To make Jobs rich! No other reason, except same kind of greed that put economy in shambles.

-Nick

Jack,

Walk in the garden? More like lost in the jungle!

I can appreciate the fun you're having with the iPad. I too enjoy exploring useless but nifty junk. I hope you get off "the pad" and back to your more informative type articles about things we might actually have a need for and could use. Let Wally lead the loopy tours of the pad mad crowd. If we do decide to get the thing, we can read the owners manual.

-JavaJoe, San Diego

Reply to "Do you need a tablet computer?"

[Regarding Jack Dunning's March 11 article, "Beyond the Hype: Do You Need a Tablet Computer?":]

Jack's interesting article has three points I'd like to address.

1. The second paragraph asks "Should someone buy a tablet for their next computer? Will tablets actually replace laptops? Is there a compelling reason to buy a tablet computer right now?"

When auto manufacturers first introduced SUVs, did writers ask "Should someone buy an SUV for their next family vehicle? Will SUVs actually replace sedans? Is there a compelling reason to buy an SUV right now?"

Potentially better questions are: What are potential functions or uses of a tablet computer? How might users take advantage of a tablet computer? What are potential efficiencies in a tablet computer's user experience?

2. Jack's article states "Tablet computers belong in one particular computer niche."

What exactly does "niche" mean? Mac OS X's Dictionary app says "a specialized, but profitable corner of the market."

What is the intent in describing iPad as belonging to a particular "niche?" Especially when the article also states "The Apple iPad is quite versatile."

How can a product simultaneously be versatile and specialized?

3. Jack's article says "Once you understand that special type of computing, you can quickly determine if a tablet is in your future. It's called one-handed computing."

How many artists, gamers and users of Magic Fiddle (www.smule.com/), GarageBand, or iMovie are performing two-handed computing with their iPads, but agree that the iPad is for one-handed computing?

A key feature of iPad (like iPhone and iPod touch) is that it runs Apple's iOS operating system, and consequently iPad's file system is transparent to users. This means that users can focus on accomplishing tasks or having fun rather than spending precious time manipulating files.

This is one of many reasons why iPad probably will be something other than a "specialized" and/or "niche" product.

-Barry Fass-Holmes, San Diego, CA

Auto Login Question

[Regarding the March 18 Digital Dave column:]

I *never* use auto login on *any* Web site. I used to use RoboForm until it went to version 7 and changed the license agreement unilaterally. At the time I bought it, I purchased a lifetime license with free upgrades forever. They changed the license to an annual renewal for everyone including anyone who purchased the "lifetime" license for it when it went to version 7. I am converting everything to LastPass, which is free. I encrypt all passwords using my password manager. This has worked very well for many years now.

I have been reading your column for many years and have learned a lot from it. Thanks for all your help over the years.

-Thornton Stewart, Houston TX

Hard Drive Thrashing

[Regarding the March 25 Digital Dave column:]

Indexing will also cause a lot of hard drive activity.

-Clayton, San Diego

I encountered a possibly related problem with IE8 (XP-SP3) to the described hard drive thrashing issue. It happens perhaps once a week on average and in my case IE starts chewing up nearly 100% of my CPU capacity and apparently accomplishing nothing with it except slowing the entire computer to less than a crawl. Even bringing up Task Manager (CTL/ALT/DEL) takes a long time (perhaps 30 to 45 seconds) and it clearly shows IE using about 99% of the CPU capacity. (I've never looked to see if my hard drive was thrashing, but will next time). Even telling Task Manager to end IE takes a while, but when IE finally closes everything else is back to normal and runs fine. I then re-start IE and it runs fine for a week or so until the problem reappears for no apparent reason. Any thoughts?

-Ted, Louisville, CO

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