

# Databyte Brief

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## Web Browsers: Your Portal to Another World...



Written by Matthew Cochrane

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Web browsers are used daily for both commercial and personal reasons however some users have difficulty using the internet effectively and safely. At its core a web browser allows you to open various content from all over the world, whether it's as simple as the written word to complex multimedia such as music, videos, or games. Due to the wide variety of materials available on the internet certain compromises have been made to make it accessible to the masses. For example, when you go to a website that has moved, you expect it to take you to the new location of the website. These compromises allow for greater ease of use but are unfortunately where most people get malware infections. So what tips can we offer for picking a web browser and using it effectively?

*#1: Security by Marketshare (e.g. The Apple Approach)*

Apple computers enjoy a limited selection of viruses and malware largely because they aren't used by a significant portion of users. Windows users can tap into similar protection by using an alternative browser. With over 60% of all computers using Internet Explorer, criminals spend the majority of their time coding for this group of users. Several options exist however one stands above the rest: Firefox. While there are several reasons to use Firefox including speed, stability, and security, these attributes are shared by many of its competitors. What Firefox does have that no other alternative browser has is user share. Firefox commands 25%<sup>1</sup> of the total market, more than double that of its 3 biggest competitors **combined**. That includes Mac users who use Safari, Apple's web browser. What this means to you is that you get a fast, efficient browser that has enough users to be checked for compatibility by most website designers.

While you may run into a site that requires Internet Explorer to function, these instances are becoming few and far between. Most of the incompatible websites are business or government websites that simply code for the largest population regardless of standards compliance.

*#2: Keep your Add-ons to a Minimum.*

You may notice occasionally while browsing the internet that you may be asked to install a plug-in or program. My advice would be this: Don't install a plug-in for anything you don't use on a regular basis, or that perform merely decorative functions. A good example is the popular cursor program known as CometCursor which allows you to use decorative animated cursors on your computer. The internet is flooded with complaints of this software slowing down computers and worse. Besides standard plugins like Adobe Flash, Acrobat Reader, Java, and plugins for whatever business applications you use, you should resist the temptation to install anything else. At their best, most plugins will simply eat up drive and memory resources while sitting on your computer doing nothing. At their worst they will launch websites, report your browsing activity to strangers, and even install other software. It's simply not worth the risk just to have a snow globe screensaver on your computer for when you're not looking at it anyways.

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## Passwords: Are Yours Secure Enough?

Written by Mason Vonnahme

Lets face it; we live in the age of technology and most of us utilize many different passwords in our everyday living. In the following article we are going to take a look at a few ideas to help create a strong and secure password. This is especially important for those of you who utilize public computers, where there is no security available.

Passwords vary in effectiveness (i.e. strength); some are weaker than others. A weak password is one that can be easily guessed by a password hacking program or individual. An example of a weak password would be "basketball" or "password" or simply using the letters in one of the rows in the keyboard, such as "qwerty".

Strong passwords, on the other hand, contain a mixture of letters, numbers and symbols that are available on your keyboard. Whenever possible, use at least 14 characters or more and they should consist of a random mixture of symbols or a combination of random symbols, letters, and numbers.

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# Wireless Networking Standards

Written by Patrick Cook

These days, if you have a portable computer, your primary concern is “Is there wireless available?” where you’re traveling. This is a brief breakdown of the wireless standards and some of the pitfalls that can be encountered.

Standard	Ideal Max Downlink Speed	Ideal Max Uplink Speed	Ideal Range
Wi-Fi: 802.11a	54.000Mbps	54.000Mbps	
Wi-Fi: 802.11b	11.000Mbps	11.000Mbps	~30 Meters
Wi-Fi: 802.11g	54.000Mbps	54.000Mbps	~30 Meters
Wi-Fi: 802.11n	200.00Mbps	200.00Mbps	~50 Meters

The two main types of wireless connection technologies are Wi-Fi and WiMax. Wi-Fi is designed for connection over shorter distances and depends on a connection to a router or access point, whereas WiMax is designed for connection over longer distances using point-to-point or cellular type connections. Of these two types, Wi-Fi is the most commonly used for computer networking, with standards -A, -B, -G, and -N in use. Wireless-G (2.4GHz bandwidth) is currently the most common standard being used. This 2.4GHz bandwidth is unregulated, and also used by cordless phones, microwave ovens, and other appliances. The cost of producing the routers and adapters operating on this frequency is lower for the manufacturer, making the devices more accessible to the public. Per the FCC, the devices operating in this range must accept any interference received, including interference that may cause undesired operation. When your wireless connection drops in and out, this is due to the router’s compliance with FCC rules. Having multiple wireless devices operating on the same channel can lead to saturation that can also result in connection drops, along with distance from the router to the adapter and the material between the two. Each of these standards are backwards compatible (a wireless-G adapter can connect to a wireless-N router), but your ideal maximum connection speed is limited by your adapter and your environment. If you have a wireless-N router and a wireless-G adapter, your ideal maximum connection speed will be 54Mbps. In a more developed environment, expect to experience some connection problems due to other wireless devices and routers, but gone are the days of driving across town to get wireless access. The wireless-N standard is becoming more prevalent due to demand and affordability, with increased performance due to operating on the 5GHz bandwidth as opposed to the unregulated 2.4GHz bandwidth.

Of course, all of this is rendered a moot point if your internet connection is no better than dial-up. Depending on your provider and plan, your speed can be between 1.5Mbps and 20Mbps. Regardless of your adapter connection, your internet speed will be limited by your provider and the site you’re connecting to. So keep an eye on these factors and enjoy the wireless web.



## Web Browsers: Your Portal to Another World...

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#3: *Browse Smart.*

If you park your car in a bad neighborhood, it’s more likely to be stolen or scratched than when it is in a well-lit parking lot at your office. Shady programs lie in wait where shady content is present. Looking for the latest hit song to download for free onto your cell phone? Be prepared to not find the song but instead pick up some other fun stuff like viruses and malware. Explicit websites and websites that offer expensive applications for free may cost you nothing up-front, but be aware that there is no free lunch. You may get by today, but tomorrow when the site operator decides he’s not making enough money and chooses to load up a credit card sniffing rootkit onto his site for you to install, that could be game over for you and your business.

#4: *Have a Backup.*

If all you do is business online then you’re unlikely to pick anything up, however even legitimate sites such as Myspace, Youtube, etc can occasionally get compromised and have malicious content uploaded to them. Having a backup of your system makes sense on so many levels but internet exploits simply make the case even stronger. In the event of malicious software being installed on your computer, at least you have your important data in the event that your computer needs to be erased.

When you notice strange behavior such as pop-ups, instability, crashes, or slowness in either your internet connection or other applications don’t ignore it! It is common for malware to install additional malware while left unattended. If you are infected, please call our team of engineers ASAP to limit the impact of the infection on your computer and others on your network. We can also help your home or business with internet filtering technology to prevent users from accessing inappropriate materials online to further minimize your risk.

<sup>1</sup><http://marketshare.hitslink.com/report.aspx?qprid=0&sample=11>



# Passwords: Are Yours Secure Enough?

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There are many different ways to create a long, complex password. Here are some examples of good methods:

What to do	Suggestion	Example
Start with a sentence or two (about 10 words total).	Think of something meaningful to you.	Long and complex passwords are safest. I keep mine secret. (10 words)
Turn your sentences into a row of letters.	Use the first letter of each word.	lAcPasIKMs (10 characters)
Add complexity.	Make only the letters in the first half of the alphabet uppercase.	lACpAsIKMs (10 characters)
Add length with numbers.	Put two numbers that are meaningful to you between the two sentences.	lACpAs56IKMs (12 characters)
Add length with punctuation.	Put a punctuation mark at the beginning.	?lACpAs56IKMs (13 characters)
Add length with symbols.	Put a symbol at the end.	?lACpAs56IKMs" (14 characters)

Table provided by Microsoft. (<http://www.microsoft.com/protect/fraud/passwords/create.aspx>)

When you are finished, you can also test the strength of your password by logging onto the Microsoft website and entering your password into the password checker.

[https://www.microsoft.com/protect/fraud/passwords/checker.aspx?WT.mc\\_id=Site\\_Link](https://www.microsoft.com/protect/fraud/passwords/checker.aspx?WT.mc_id=Site_Link)

You're job isn't done after creating a strong password. Far too many people are careless with their passwords. They will carry them around on a piece of paper, write them down in a notebook on their desk, or even leave them on a sticky note inside an unlocked drawer. Whether it's a USB flash drive, a PDA, or CD, your passwords should never be stored in an unprotected environment. Also, avoid sharing your password with other users. What's the point in locking the door if you're taping the keys to the outside? Most importantly, do not give away or share your password via e-mail, as email is sent in clear text, which is unencrypted, human readable data. Think of your email delivery process like your local postal service; your letter will get delivered from point A to point B, but at any given time that letter can be opened and its contents exposed.

Even with all these measures in place, be sure to monitor all the information you protect with your passwords, such as bank accounts, email, shopping accounts, and so on. Strong and secure passwords can help protect against fraud and identify theft, but there are no guarantees. If you notice any suspicious activity that could indicate someone has accessed your information, notify the proper personnel (banks, email providers, etc) and change it immediately.

## Microsoft Office 2010

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Office 2010 was designed to integrate specifically with the Windows 7 environment, including jumplists for the most common used items, and the printer control panel was overhauled to include more options for printing without having to wander around in several advanced print dialogs. Office 2010 has also been specifically improved to be able to integrate with several popular social networks and the new Office Live service, including a new feature in PowerPoint to be able to broadcast a presentation to a virtual meeting in your Office Live workspace.

Overall, Microsoft has put together a well thought out and comprehensive product in Office 2010. It balances business and enterprise users needs with home user needs, and with a full rich feature set, it would be well be worth checking out.



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## Microsoft Office 2010

Written by Ken Roesler

With the recent release of Windows 7, Microsoft will be soon releasing the newest version of their productivity software, Office 2010. The first thing that users and businesses should be aware of is that Microsoft has changed around suites and pricing for this upcoming product.

<b>Edition:</b>	<b>What's Included:</b>
Office Starter Edition 2010	Word & Excel
Office Home & Student 2010	Word, Excel, PowerPoint & OneNote
Office Home & Business 2010	Word, Excel, PowerPoint, Outlook, & OneNote
Office Professional 2010	Word, Excel, PowerPoint, Outlook, Access, Publisher, & OneNote

The Office 2010 Starter Edition will only be available preloaded on new workstations and will be ad supported, and the Office 2010 Home & Student edition is licensed for non-commercial use. Another change in the pricing structure is the previous practice of providing upgrade pricing for previous owners of Office products will be eliminated.

Returning to Office 2010 is the Office 2007 ribbon interface, so those users that are familiar with Office 2007, the changes in the interface will be slightly different. It also features Click-to-Run, which is a new software delivery system developed by the Office product team and is based on virtualization and streaming technologies from Microsoft and is optimized for home users on high-speed internet connections.

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