

Snow Leopard and Windows 7

(A good match on a Mac?)

By Bill Sommerville

When it comes to operating systems (OS), there are plenty of stories both positive and negative of their behaviors. This year with the introduction of Snow Leopard and Windows 7, I decided to take a different approach. Normally like many of you I would be researching different organizations and forums finding the latest problems, bugs and features of the newest and supposing greatest OS/software out there. Even though there are forums that touch on it, I could not find any real world tests that cover these operating systems on the same screen together to date.



I decided that I would purchase the materials I wanted myself, conduct my own installs and write the results. The items I acquired are as follows:

Hardware: Apple® (MC226LL/A) MacBook Pro 17" Intel® Core™ 2 Duo 2.8GHz 500GB Notebook with Leopard installed.

Operating Systems: Windows 7 Ultimate, Snow Leopard

Software: VMware 3.0

I will be covering the following areas during this process:

- Install of Snow Leopard and features
- VMware Fusion 3.0 install process and features
- Windows 7 install process and features

Mac OS X v10.5 Leopard



This will not be any type of lab test. This is what I called Real World Street Test (RWST). My Internet connection is cable and I will be timing any downloading required. Even though I am a PC to Mac converter (running 5 years now), I still use both systems, as there are requirements that call for one over the other from time to time. I am only interested in the results and will report my findings. This paper will be broken

down in the following sections when covering the actual tests:

- Subject
- Situation
- Description
- Recommendations (if any)



I will include a summary of my findings covering all the subjects with a conclusion. Going forward this will be a living document as discoveries occur. For many of you this street test will not be of much benefit. You are either a PC or a Mac user and do not plan to forge the two OS on one type of hardware. But for those pros out there who work on both because of their requirements, this may assist you. Those whom are already using this approach, may be interested in VMware 3.0. This is the latest version and the way it behaves may assist you on your decision in going to it or sticking with what you already have.

A Little History

I started in the computer world when capacity was increasing from 8" to 5.25" floppy disks. Before the Commodore SX64 and Vic 20 took to the streets and when DOS with batch programming was king. My first PC clone was a 286 Harris tower and I was hooked so bad, that I did like the faucet commercial and build a desk that turned out to be a wall unit around it.



As time progress in the industry, I struggled to keep up. The technology was moving faster and getting smaller all the time. I had barely owned my Harris a full year and I was already upgrading from 10mb (5.25" drives) to 72mb on two separate 3.5" drives. After two years I upgrade to the 486 chipset (AMD) and memory to handle the new Windows 3.0



OS (so called). I was attuned to all the software of those times (Word Star, Word Perfect, Quadro Pro, Harvard Graphics, etc) and like many others, I was seeking the holy grail of operating systems. An OS that did what I wanted it to do without crashing and was a part of the main stream as well. This always seemed illusive, but the next best thing was Unix and then Linux. The only thing was they did not have much of an inter-facing gui, but Apply jumped into the field to cover that area. It was not mainstream but it did not crash and for some of us, that was a godsend not to see the blue screen of death. I will admit it took a while to convert. In fact, it took a Canadian friend of mine to convince me. Now looking back, I wonder why I did not do it sooner. Oh, I know why now, cost.

I have learned there will never be the perfect operating system. There are to many other elements (politics) to ever keep that from happening. There is nothing that man has ever made that was perfect. So I guess the fun is in the quest. It sure was profitable for somebody with all the money we all have spent heh? I guess the next step was to merge the two.

What is going to make this test different from the others that you may have read about is that there is no conflict of interest here. No one sent me anything to test for free. No one ask me to do this. This was of my own initiative with no type of reward for the effort.

All I ask is that you use this information for your own benefit and share it with others. I encourage questions, inquiries and concerns as I report my findings. As I may be the igniter, you keep the flames burning as we seek out the results, issues, and workarounds together. If this takes off then I will start up a forum site and we can go from there.

Marketing: What has been told so far.

Windows 7 or Bust

Windows had some work to do and everyone knew it. When Vista is so bad that third party companies were making money to go back to XP, Redmond you have a problem. I purchased a Dell 1330 XPS laptop and Dell was going to charge me \$150 bucks to put XP on it. I said no thanks and Vista acted up so bad, it might as well have been a virus itself. I ended up taking it to a local dealer to put XP on it for 60 bucks and it has been working like a charm ever since. I am sure there are many more horror stories. Windows 7 main reason for existing is to stop the age-old problem that has haunted Windows since its inception. When I saw the movie Crash, I was surprise Windows was not in it. In addition, Windows 7 is suppose to do the following:

Windows 7 combines remarkable ease-of-use with the entertainment features of Home Premium and the business capabilities of Professional, including the ability to run many Windows XP productivity programs in Windows XP Mode. For added security, you can encrypt your data with BitLocker and BitLocker-To-Go. And for extra flexibility, you can work in any of 35 languages.

Those are some marked improvement, but my colleges have asked why did Microsoft go with an additional 64-bit option when they could not keep Windows from crashing in 32-bit mode? The best answer I could give is that it seems to be the trend of the industry. It does make me wonder as long as 64-bit has been out, the push for it in recent years. Was the research in this technology that long or is the transistor space reaching its limit when it comes to speed leaving 64-bit as one of a few options to explore? Like with all improvements of this caliber, it is comforting to know I am not the only one trying to keep pace. There will be compatibility issues going forward in the 64-bit world. There is a FAQ section [32-bit and 64-bit Windows: Frequently asked questions](#) that covers going from 32-bit to 64-bit mode. Apparently many felt that Windows should finally prove themselves in 32-bit mode before going to a world where others have proven their stability.

The chart below shows the addition points for Windows 7:

See why Windows 7 is better

Makes everyday tasks simpler and easier	Windows XP	Windows Vista	Windows 7	
Multi-task more easily	✓	✓	✓+	Windows Taskbar ⓘ
Communicate and share with free photo, e-mail, and IM programs	✓	✓	✓	Windows Live Essentials ⓘ
Browse the web easily and more safely	✓	✓	✓	Internet Explorer 8 ⓘ
Find files and programs instantly		✓	✓+	Windows Search ⓘ
Open the programs and files you use most in just a click or two			✓	Pin ⓘ Jump Lists ⓘ
Navigate lots of open windows more quickly			✓	Snap ⓘ Peek ⓘ Shake ⓘ
Easily share files, photos, and music among multiple PCs at home			✓	HomeGroup ⓘ
Print to a single printer from any PC in the house			✓	HomeGroup ⓘ
Simplify managing printers, cameras, music players, and other devices			✓	Device Management ⓘ
Organize lots of files, documents, and photos effortlessly			✓	Libraries ⓘ
Connect to any available wireless network in just three clicks			✓	View Available Networks ⓘ
Works the way you want it to	Windows XP	Windows Vista	Windows 7	
Personalize your desktop with themes, photos, and gadgets	✓	✓	✓+	Performance Improvements ⓘ
Connect to company networks securely	✓	✓	✓+	Domain Join ⓘ
Run lots of programs at once with better performance on 64-bit PCs	✓	✓	✓	64-bit Support ⓘ
Built-in protection against spyware and other malicious software		✓	✓+	Windows Defender ⓘ
Help keep your data private and secure		✓	✓+	BitLocker ⓘ
Manage and monitor your children's PC use		✓	✓	Parental Controls ⓘ
Run many Windows XP productivity programs	✓		✓	Windows XP Mode ⓘ
Designed for faster sleep and resume			✓	Sleep and Resume ⓘ
Improved power management for longer battery life			✓	Power Management ⓘ
Makes new and exciting things possible	Windows XP	Windows Vista	Windows 7	
Watch and record TV on your PC	✓	✓	✓+	Windows Media Center ⓘ
Create and share movies and slideshows in minutes		✓	✓	Windows Live Movie Maker ⓘ
Get the most realistic game graphics and vivid multi-media		✓	✓	DirectX 11 ⓘ
Stream music, photos, and videos around your house			✓	Play To ⓘ
Connect to music and photos on your home PC while away from home			✓	Remote Media Streaming ⓘ
Touch and tap instead of point and click			✓	Windows Touch ⓘ

✓ = Included in this version of Windows
 ✓+ = Improved in Windows 7

Additional points from Microsoft of the different version:

Features	 Windows 7 Home Premium	 Windows 7 Professional	 Windows 7 Ultimate
Estimated Retail Pricing (ERP) for upgrade license.			
Make the things you do every day easier with improved desktop navigation. ?	✓	✓	✓
Start programs faster and more easily, and quickly find ? the documents you use most often.	✓	✓	✓
Make your web experience faster, easier and safer than ever with Internet Explorer 8. ?	✓	✓	✓
Watch, pause, rewind, and record TV ? on your PC.	✓	✓	✓
Easily create a home network and connect your PCs to a printer with HomeGroup. ?	✓	✓	✓
Run many Windows XP productivity programs in Windows XP Mode. ?		✓	✓
Connect to company networks easily and more securely with Domain Join. ?		✓	✓
In addition to full-system Backup and Restore found in all editions, you can back up to a home or business network.		✓	✓
Help protect data on your PC and portable storage devices against loss or theft with BitLocker. ?			✓
Work in the language of your choice and switch between any of 35 languages.			✓

One thing history has taught us is that in time, the answers will be provided and the truth shown. There will be no exception of Windows 7 in this area. Microsoft states with Windows 7, a totally different approach was taken:

“By the time we've got running code thousands of people outside of Microsoft have provided input and influenced the feature set and design of Windows 7. As we're developing the features for Windows 7 we work closely with PC makers, enterprise customers, and all types of customers across small business, education, enthusiasts, product reviewers and industry "thought leaders", and so on. We shape the overall "blueprint" of the release based on this wide variety of input. As we have design prototypes or code running, we have much more targeted and specific feedback by using tools such as usability tests, concept tests, benchmark studies, and other techniques to validate the implementation of this blueprint. Our goal with

this level of feedback is for it to be representative of the broad set of Windows customers, even if we don't have a 1:1 interaction with each and every customer."

Microsoft seems very serious on making Windows 7 work. Their approach seems sound. Microsoft has established their own feedback section on the Web for anyone whom has worked with Windows 7 to submit his or her experiences. Out the gate the feedback seems positive with still challenges to go as example:

Dear Windows 7 Engineers,

*First Let me offer my congratulations on your amazing progress on windows 7, second I want to bring to your attention a big a problem faced by me and a lot of people on Windows Operating System which is the DPI Scaling experience on Window 7; I use 17" High Resolution Display (1920*1200) for my home laptop & 22" High Resolution Display (1680*1050) for my work, so I need to set the DPI to 120 instead of 96, which result in noticeable pixelation on most of the Application (Icons , controls, Images ... etc) even the Built-in Application in windows like MS-Paint have pixelation ,Window Superbar also have noticeable pixelation (see the following screenshot <http://img264.imageshack.us/img264/4784/120dpint9.png>), also sometime windows do not scale up on size but elements inside it do and this cause some controls to be invisible.*

I ask you kindly to consider the following:

- 1. Implement Scaled Vector Graphics on all icons and windows control elements instead of pre-rendered bitmap images.*
- 2. Update all windows Built-in Application (Paint, WordPad, etc) to be DPI intelligent.*
- 3. I know you don't have control over third parties applications and programs that it's not DPI intelligent, but you should implement some flexibility to work around this, like ability to scale each windows independently from the title bar.*

I really hope you will implement this by the time of the release candidate, As high resolution displays is not something that will happen on the future ... it's reality now; the days of 15" CRT (72/96 DPI) monitors is gone.

Thanks in advance, this is my first feedback about windows 7, and hopefully one of many.



My bias may be showing here but I believe those Apple commercial were of great concern to Microsoft. Not only were they truthfully entertaining, but they may have proven to be a factor in the increase market share that Apple has been enjoying in the hardware market. Many say along with the implosion of Vista, those commercial sold more Macs than anything Apple could have done on their own. Along with their other products that worked just as well together, Microsoft realized that this was one company that they could not do the usual (turning their 16"deck guns and blowing them out of the water). The funny thing about all of this is like America when they sell or give arms to a nation that they end up fighting sometime in the future, Microsoft was a contributing factor to where Apple is today. At this point it makes no difference if Microsoft's turn-around with

Windows 7 is because of Apple's aggressiveness or of their own initiative. When it comes to Microsoft and its long history, you can truly say it is better late than never.

VMware: Trying to Make a Serious Mark Positive/Negative Remains to be Seen

One reason I joined the IT world was there was no one person that knew everything. Team effort is the key in this business. It seems this may have been a motto as VMware came on the market in 2000 with the release of VMware Workstation 1.0. Since then they have come up with a host of versions for both workstations and servers systems. Tests in comparison to Parallels, Fusion is slower when it comes to speed between 14-20 percent, depending on which OS and bits you are running. [Fusion vs. Parallels Desktop for Mac: Which is Faster.](#)

Fusion 3.0 is the new kids on the block (released in Oct, 09). Tests with it are not out yet and in comparison of the last set of test from MacTech, it will be a few months before those results are in. Some of my sources say it seems to be enough to rattle Parallels. In reaction their new Desktop 5 hit the streets endorsed by Macworld and several other organizations. One feature that I notice Fusions does not advertise (and Parallels does) is the ability to launch Windows applications from the Mac Dock. Knowing the speed test results as well, improvements were naturally in the making

OS/Environment	Result
Windows XP, 32-bit, 1 Processor	Parallels Desktop runs 14% faster
Windows Vista, 32-bit, 1 Processor	Parallels Desktop runs 14% faster
Windows XP, 32-bit, 2 Processors	VMware Fusion runs 10% faster
Windows Vista, 32-bit, 2 Processors	Parallels Desktop runs 20% faster
Windows XP, 64-bit, 2 Processors	Parallels Desktop runs 15% faster

for Fusion. Some of the forums I checked out seemed to portrait positive comments towards both. I summed this up as car owners with some liking Fords, Chevy's, and Toyotas. I decided on VMware due to the performance it has displayed at work. In the business world, it seems to have made a mark. My IBM buddies say that is all they use. Ford and GM as well (with Ford being a little more cautious}. This decision may have been a mistake due to the VMware's community comments on several issues [VMware Fusion 3 runs extremely slow](#) with XP, Windows 7 and Snow Leopard. VMware's selling point is that they can save companies money with many virtual servers running on one physical box. From what I understand, the savings can be quite substantial especially those with huge data centers.

VMware Fusion 3.0 may be Fusion 3.0.1 by the end of the year to fix several bugs that many users discovered that should have come up in test results if there were any. They seemed pretty frustrated with the way the system behaves between 32 and 64-bit. Even though the industry may be going that route, I fail to understand all the hoopla. For those whom are wondering as well, this link [Snow Leopard and 64-Bit Mode](#) may help. VMware claims that Fusion 3.0 was build from the ground up for Snow Leopard, which in accordance to Gary at Macmost, now has the ability to run 64 bit software while in 32-bit mode. You have to admit the timing of all these OS improvements and Parallels/VMware to make the connections was either a great insight, one hell of a coincident, or a compromised agreed planning strategy amongst the companies themselves, which makes great business sense.

Tiger, Leopard, Snow Leopard

Nice improvements, Unix its Solid Rock

Having started on Tiger, I will be the first to admit there were some bumps along the way, but at least I was able to stay behind the steering wheel and keep driving. Why? The answer is simple, Unix baby, it's the Unix.

On the PC side, Linus Torvalds (the creator of Linux for PC systems) could have went another way. He could have directed his efforts towards a generic windows system that could run on a Sun or IBM Power chip. Just thinking about that I am sure he felt he would have been thrown from the car over the cliff.

Many believe Windows major fault is its foundation operating system language. In addition, other believes that DOS plays a bigger roll than just being virtual. Who would have wanted any of that drama from those software companies anyway?

I am sure you have already heard that most of the improvements on Snow Leopard is on the backend. Smaller, faster applications with more features and taking less disk space. It makes you wonder about technology of adding



improvements and data of how small can they go.

One of Snow Leopard's viewable major improvements is the Installer as noted below:

"Interestingly enough, installation is one of the few parts of Snow Leopard that's dramatically different than previous versions of OS X. Unlike Microsoft's subtle nudges towards clean reinstallation of Windows 7, Apple's quite proud of the new 10.6 installer, which upgrades in place, quarantines incompatible apps and plugins in an "Incompatible Software" folder, and boots you right back up with little to no user effort. Seriously, you just stick in the disc, open the installer, enter your password and go – that's it."

There are a host of other features that could be a big or small thing. This depends of how you use those features and what you would like those features to do more of. Snow Leopard is not without it's pundits whom have raised some security concerns about the way it protects against malware. When a company fails to deliver what the consumer wants, it provides an open window of opportunity for others to take advantage of and provide what is desired. It seems no matter how good an OS may be with features, the one thing it really needs turns out to be lacking. Yet as politics dictates, if an OS truly had the protection that was required, there would be many third party software security companies that would be out of business or performing some diversification.

In the seventy-third issue of iCreate on page 9, there is a quick breakdown between Windows 7 and Snow Leopard.

OS	Disk Space	Speed Boost	Exchange Support	Price Point
Windows 7	20 GB More	Same as Vista	Not Built In	\$130 +
Snow Leopard	16 GB Less	Improved	Built In	\$29

The 16GB I got from page 20 and did a little math. In the listing, it is noted as being 3GB plus. I am sure as time passes there will be more exact numbers. It seems funny that these two software giants that are taking different approaches towards the products they render and support, yet are still profitable. I will say this for Microsoft, sticking with the version number system (whatever it may be) throughout the years was a sound decision. Apple on the other hand may run out of members of the cat family. Jaguar, Tiger, Leopard now Snow Leopard, What's next? Cheetah, Saber-Tooth, Lion, Bengal, Siberian, and end it with the most tamed of them all, Domestic.

Before I get Started

A little conclusion here

As I think about my history in this Industry I feel a little frustrated. Not so much of the way we all have been taken for the ride. I realize it was necessary in order to have the things we enjoy today, but more of my own ignorance and lack of initiative in discovering things sooner rather than later by where saving time and maybe some money.

There are a few programs I need Windows for. Many of them are Visual Basic (VB) apps (with Perl background stuff when needed) I wrote that uses the Keep It Simple & Stupid (KISS) approach. I use VB because it is fast and I do not need to share it with others. I mostly use Perl for file modification on the backend and let VB with the gui do the calling. It works for me and the amount of tools I have developed assist me greatly in getting my job done. I do not need enterprise level stuff so if Windows 7 cannot handle my old VB Pro 6 language software, I will have to go back to XP where it runs just fine.

I remember those times when Microsoft started flexing their muscles against IBM. Then we looked at Microsoft as Robin Hood simply because IBM software and machines were so darn expensive. Maybe I am sounding like a spoiled brat here. We should be somewhat thankful for the combination of Windows and clone PC's. Their combination was a nice one two punch that made the industry affordable for the masses.

Macs are not perfect but they are a great improvement compared to other alternatives. They should be, they certainly cost enough, but if there is one thing Apple has proven, you certainly get what you pay for.

So my hat is off to both companies. Their different approaches (agree or not) spawned many other 3rd party companies and trillions of thoughts and ideas that have help people across the globe. As we move forward, I hope you will become more involved in forums and local organizations towards systems that will be an improvement and a benefit to all.

Let Me Get Started

This will start with the opening of the Mac. Everything that had been ordered has been sitting unopened with exception of the software. All disks were copied to my main network drive and backed up to three other drives. All my applications, languages, book CD's documentation and other data are on three other network drives. As you can tell I take backups very seriously. You rather have it and not need it than to need it and not have it. If I do delete, you can bet it is backed up. All my keys and serial numbers go in a goldmine file that is encrypted and password protected. Yes of course it is backed up as well.

Subject: Startup/Upgrading the Mac

Situation: Opening the box and checking the components was simple enough. One thing I did notice was that Snow Leopard was not installed on the system, but it came with a Snow Leopard DVD. This told me upgrades were going to be required. In addition, from my previous purchases of Mac Pros, I would get some connection cables (video, etc). No such luck with this purchase.

Description: After the Mac fired up and I performed the configurations (accounts,



keyboard, regions, etc), I proceeded an all application upgrade with Leopard. This took over an hour to complete. Next, I performed the upgrade with Snow Leopard. This took over one hour and ten minutes of time. Once that was done I performed another software upgrade, which was approx 15-20 minutes. So you are looking at upgrade times between 1.5 – 3 hours. I did not experience any errors

and once I received the message that I was up to date, I knew I could go forward with installation of VMware Fusion 3.0.

Recommendation: I do not see anything that could be done to avoid this. With the event of Snow Leopard with features of saving space and a low price, an hour may not seem much. The other upgrades (Safari, iTunes, Security, etc) will have to be done sooner or later anyway. I would recommend during this time in working on your iPhone or one of your other Macs but keep an eye out on the screen in case of trouble.



Subject: Installation of VMware Fusion 3.0

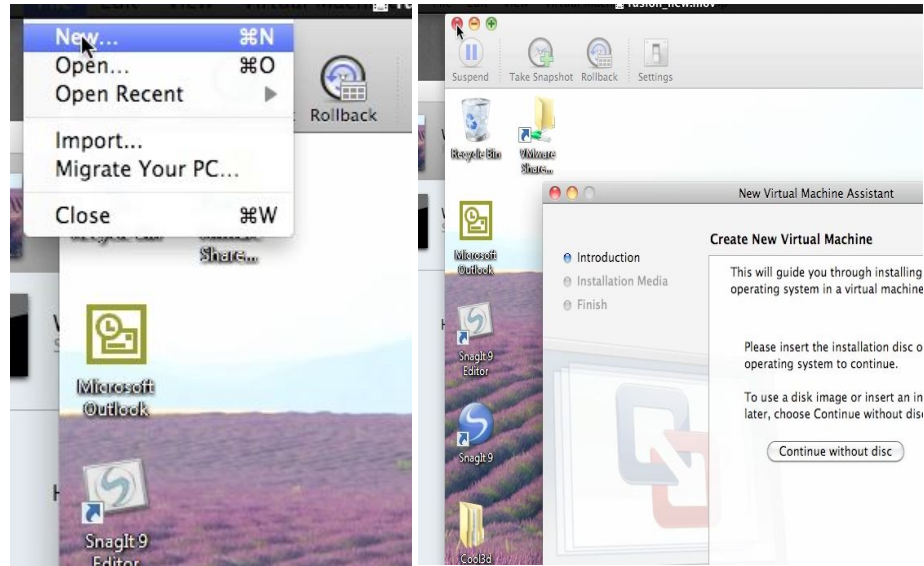
Situation: This is the newest version of Fusion with fixes and improvements from version 2.0 and 1.3. This will be a CD install and I will go with the defaults.

Description: The install was fast and smooth as a jewel. Once read the CD showed the dialog windows to start the install. Clicking the Fusion icon started the install process. Like with all applications, you have to agree with the license requirements and insert your serial number or key. Then where you want (default the Macintosh HD, Application directory) the software installed. Once this is done Fusion 3.0 does the rest. This was refreshing after a 3-hour upgrade of the OS and other software. Installation time was less than 3 minutes.

Recommendations: Follow the instructions and use the default recommendations. Installation should be as smooth as mine was.

Subject: Installation of Windows 7 under VMware 3.0

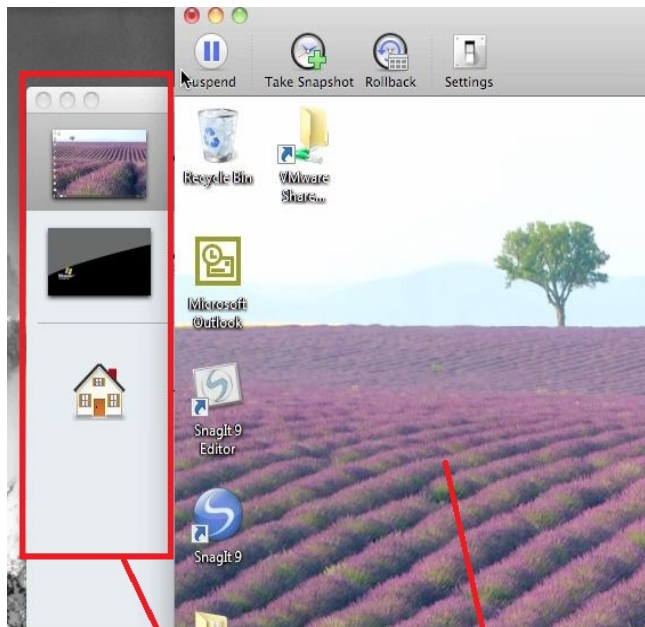
Situation: This process involves following the instructions provided. VMware handles the installation itself with minimal user input. Default on space is 40GB.



Description: This installation was very smooth as well. There were some dialog boxes with defaults already selected (allocation of space, view options, etc). There are three view options as follows:

Single Window
Utility
Full Screen

I went with the default of single window. You can change the views at anytime

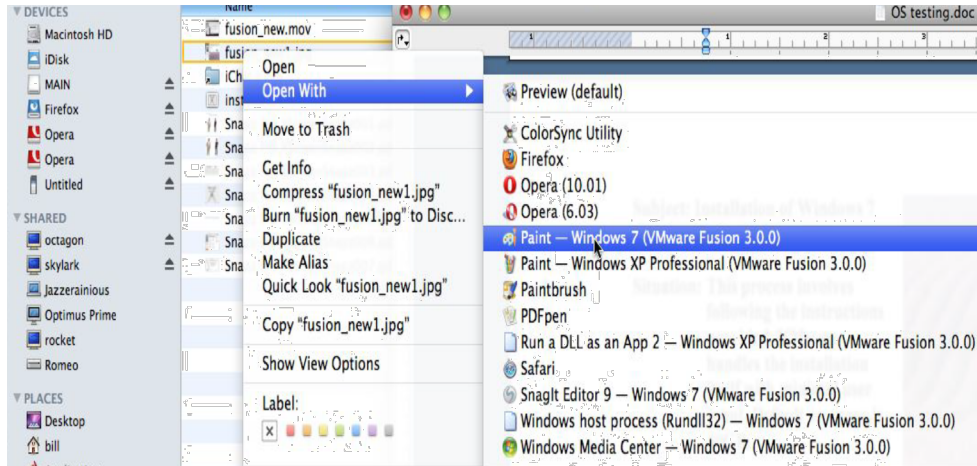


Utility Window List of VMware

Windows 7

after the install. One important dialog is the Sharing option. You can either have the files and applications be shared across the board, or separated where to move files and data across using cut/copy and paste . I choose to share across the board. I am glad I did because if you are in Snow Leopard and perform a control click on a jpeg file and select Open With, all applications that can work with that file (note figure below) across operating systems will be listed. Another important dialog box requires the key for the OS. If this is not provided,

the install will not complete. VMware provides the OS key to the OS installation directly. It took approx 1-3 minutes to complete the install. Once this is done, VMware lists it in the utility windows where you can resume or suspend the operating system of your choice.



Note: If you notice in the picture above, I have also installed Windows XP. I will explain this later.

Recommendations: Follow the instructions and go with the defaults to start. Changes can be made after you are familiar with the behavior of VMware and the OS installed. Installation should be as smooth as mine was.

Subject: Installation of other Operating Systems (Windows XP Professional)

Situation: VMware Fusion 3.0 claims it can handle several operating systems at once. You can install Linux if you like, but Mac is Unix/Linux itself. Even though Windows 7 can go into XP mode, it is mostly a virtual connection within Windows itself. A virtual within a virtual sounded dangerous to me (besides it did not work). Since Microsoft stated some of your applications you may not run on Windows 7 and the development of an XP mode existed, hence the full install of XP Pro.

Description: This install was the same process as with Windows 7. Again be sure to have your product key ready for Fusion 3.0 to provide for the OS. I used all the same defaults and option to share files across the board as well. The time took approx the same as with Windows 7.

Recommendations: Same as the Windows 7 install.

After Install, Discoveries So Far

For a first time user, I was impressed with the installation process. I remember past efforts with this on older Macs (Virtual PC), but like the movie Top Gun, crashed and burned. To install Fusion 3.0 and the images of two operating systems took less time than the upgrade of Snow Leopard itself. But since it is the foundation of everything, like a building you have to make sure the foundation is right the first time.

The sharing across the board option during the install of the operating systems shows the real power of Fusion 3.0. I was not only able to have Windows 7 and XP cooking on the same screen, but I found a little old program that would not run on Windows 7 that would run on Windows XP instantly using the same program directories and application files. This is a great asset in not only saving disk space, but provides greater savings on software purchases. For example, Snagit is a great screen capture tool. What makes it so powerful is not only its variety of snapshots, but its editing capabilities that can enhance any image.



As good as many screen capture tools are out there for the Mac, none of them stack up to Snagit, which you can only get for Windows presently. I can use Snagit to modify a host of screen capture formats performed on the Mac side of the house (and vs.) without performing any type of file transfers in the process. Even though Snagit is limited to Windows, I can still use my Mac screen capture (Snapzpro) to capture certain segments outside of the window and have Snagit perform the editing on those same files.



There are many graphic editors out there, but Snagit is the cats meow with its easy selections and speed to get complex things done.

News Flash: Snagit for the Mac may be on its way. Check it out at [You Had Me at Snagit](#). Yes, I know Snagit fans we have heard this before.

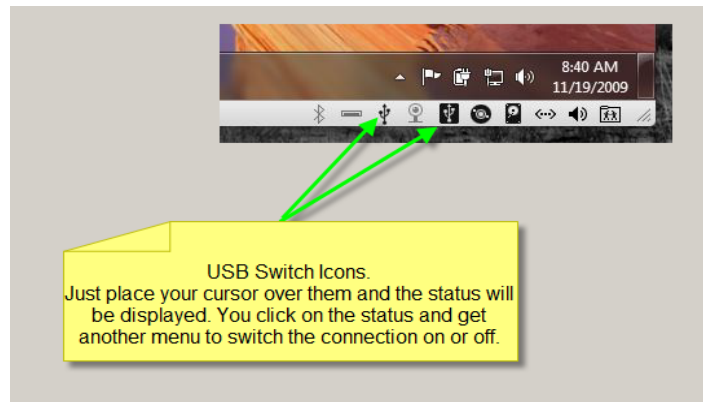
Subject: USB Connections

Situation: In virtual mode, Windows 7 has what I call a backup in connections of USB. I have found that when you usually plug in your USB key or cable connections, Windows normally discovers it and begins connections procedures. Under Fusion 3.0 this may or may not be the case.

Description: In most cases it was, but there were occasions when instant connection after plug in was not established. Not to fret though, there are some USB icon indicators located at the bottom of the screen for every USB that is plugged into your system. Placing your cursor over the icon provides the type of connection and status (connected or disconnected). You can click on the icon and a little menu will appear providing you the option to connect or disconnect in accordance to the current connection status. This seemed to work well. Since Fusion 3.0 provides the sensation of shutting down or restarting

your virtual computer. If you perform a reboot of Windows 7, I did notice that all connections are discovered. It seems sometime putting it in suspend mode causes the disconnections.

Recommendation: Be patient with this feature. The connection has about a 2-9 second delay sometimes. If it does not connect performing the method described in the Description section and then the reboot as a last resort.



Update of this Document and Project

In order to keep this updated, as I discover items of interest they will be in separate labeled docs so you will not have to go through so many pages to find what may interest you. I hope this initial paper has been helpful and I appreciate your time and interest. You can expect another update on or about 25 Dec 2009.

Refences:

[Windows 7 Forms!](#)

[Windows 7 Compatibility Center](#)

[Windows Version Comparisons](#)

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