

Website: <http://www.miniapples.org>

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From the Editor:

This month's issue features the usual SIG meeting reports and extensive coverage of the latest version of the Macintosh operating system, Mac OS X 10.6, also known as Snow Leopard. A couple of Snow Leopard articles are reprinted here, but be sure to check out the Hot Links section which has a slew of links to Snow Leopard-related info, including advice on how to install it and several reviews from major media sources. (For the Apple's official Snow Leopard website, click [here](#)). Apple also released what may be the final update to Leopard: 10.5.8. See the article in this issue for details.

On the music front, Apple released iTunes 9 and new iPods, so I've included a review of the new iTunes features plus several links to iPod info.

Ron Heck, Publications Director

Calendar

At the right is a list of mini'app'les meetings for October 2009. The information was compiled as this newsletter was being assembled and is subject to change. As always, confirm the Special Interest Group (SIG) date, time, and location with the SIG Leader or the mini'app'les website: www.miniapples.org.

Meeting Calendar – October 2009			
Monday	Oct. 5	7:00 pm	Board of Directors Meeting
Tuesday	Oct. 6	7:00 pm	Mac OS X SIG
Wednesday	Oct. 7	6:30 pm	iWork/AppleWorks SIG
Wednesday	Oct. 14	7:00 pm	VectorWorks SIG*
Wednesday	Oct. 14	7:00 pm	TC Photoshop User Group*
Thursday	Oct. 15	7:00 am	Macintosh Consultants SIG
Thursday	Oct. 22	7:00 pm	FileMaker Pro SIG
Monday	Oct. 26	7:00 pm	Mac Q&A SIG

Meeting Locations and Leaders		
Meeting	Location	Leader
Board of Directors	Merriam Park Library, 1831 Marshall Ave, St Paul	Bruce Thompson, 763-546-1088
FileMaker Pro SIG	Partners, 2250 Terminal Rd, Roseville	Steve Wilmes, 651-458-1513
iWork/AppleWorks SIG	Penn Lake Library, 8800 Penn Ave. S., Bloomington	John Hunkins Sr, 651-457-8949
Mac OS X SIG	The Foundation, 311 7th Ave N, Minneapolis	Bob Demeules, 763-559-1124
Mac Q&A SIG	Merriam Park Library, 1831 Marshall Ave, St Paul	Les Anderson, 651-735-3953
Macintosh Consultants SIG	Good Day Café, 5410 Wayzata Blvd, Golden Valley	Bob Demeules, 763-559-1124
TC Photoshop User Group*	Minneapolis College of Art & Design, Auditorium 150, 2501 Stevens Ave S, Minneapolis	Jeff Tranberry, phone number not available
VectorWorks SIG*	CJR Office, 4441 Claremore Dr, Edina	Charles Radloff, 952-941-1667

* This SIG is NOT sponsored by mini'app'les; the listing is provided as a service to members.

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Submissions

We welcome newsletter submissions from members. Perhaps you're using new software that you just can't live without. Maybe you have a new piece of hardware that you find extremely useful and of high quality. On the other hand, you might be struggling with problematic software or hardware.

Why not share your experience with other members by writing a product review? Doing so may steer others towards quality products or help them avoid the problems you may be having.

You can E-mail your submissions to ronheck@comcast.net. Submissions must be received by the 15th day of each month to be included in the next month's newsletter. I am happy to help clean up any articles submitted for publication in this newsletter.

SIG Reports

If you don't see a report from your favorite Special Interest Group (SIG) in this issue of the newsletter, please take a few minutes to provide a summary of the next meeting for the next newsletter.

Hopefully, understanding what material and what level of material is being discussed at the different SIG meetings will encourage more people to attend SIG meetings and to join the mini'app'les. Thanks for your help.

Erik Knopp Retires

By Les Anderson

Erik Knopp has been mini'app'les Membership Coordinator for the past 12 years and he has decided to step down from this position. As Membership Coordinator he maintained the club membership database, sent out renewal notices, and deposited the dues checks.

When we had a printed Newsletter, Erik also printed the mailing labels. I'm sure many members don't realize all the work that goes on "behind the scenes." We owe Erik a big Thank You, and a pat on the back for all he has done.

Replacing Erik as Membership Coordinator is Sandy Foderick; she can be reached at sfoderick@mac.com. If the name sounds familiar it's because she is the Editor of the Apple User Group Bulletin. You can find it on the mini'app'les Forum in the Members Private Forum: <http://miniapples.7.forumer.com>.

Sandy is heavily involved with Apple Computers. She was the former chair and is a current member of Apple's User Group Advisory Board. She also is a long term member of mini'app'les.

In real life she teaches Humanities and communications at Argosy University in Eagan, and she is the chair of their Institutional Review Board. She is also a mom to four Mac users.

I know our membership is in very capable hands. When you see Sandy be sure to thank her for her service.

iWork/AppleWorks SIG of September 2009

by Harry Lienke

In September the iWork/AppleWorks Special Interest Group (SIG) met in Saint Paul for the first time. The meeting began with Harry answering a question concerning back-ups of iCal and Address Book data and Safari bookmarks. He pointed out that complete sets of back-up information for iCal and Address Book are saved using File > Back Up iCal... and File > Export > Address Book Archive..., respectively. One must copy the file at *UserName/Library/Safari/Bookmarks.plist* to create a back-up for Safari bookmarks.



A call for announcements brought forth the news of the release of OS X 10.6, also known as Snow Leopard. Someone pointed out the software was available for \$29 at the Apple Store and \$25 at Best Buy. It was reported the installation is accomplished by clicking on a single button.

At this meeting our friendly facilitator, Pam Lienke, continued our introduction to **Numbers**, the spreadsheet component of iWork. She launched Numbers '09 from the dock and accessed the Template Chooser (depending on your Preferences setting, the Template Chooser opens automatically when Numbers starts or can be selected from the File Menu). Pam again showed the variety of templates available and how the individual pages of each template can be previewed by scrolling the cursor across the thumbnail view of each template. The slider at the bottom of the Template Chooser is used to expand the thumbnails so more detail is visible on each page.



Pam selected the "Event Planner" template. She showed how to change the placeholder text in a heading (triple-click to select all the text in the text box and then enter the new text).

She inserted new pictures in media placeholders by dragging the images from the Finder and by selecting Insert > Choose from the Menu and then navigating through the Finder windows to the image(s) of interest. It was pointed out that the characteristics of the image can be adjusted within Numbers using the Adjust Image window (View > Show Adjust Image). Someone commented that the Media button on the toolbar can be used to access the iPhoto library, movies, and audio clips. A variety of frames can be utilized to enclose each image; select the Inspector and then the Graphic Inspector (its button has a square with a circle covering the upper right corner of the square) and select Picture Frame from the Stroke section of the window.

Pam's next feat of legerdemain was dragging contact information from the Address Book and having the information appear in a table. Next came the disclosure that some data being calculated in one table was based on data appearing in another table. What will those wizards at Apple think of next?

Pam revealed she modified this template to help plan Christmas Dinner 2008 for the Lienke household.

Someone asked a question about the Home Inventory template so we spent a few minutes investigating it.

Moving on to **Pages '09** because an attendee was interested in brochures, Pam used the Template Chooser to quickly review a few of the templates. She decided to work with the "Elegant Brochure."



Pam worked with linking and unlinking text boxes and discovered that when two text boxes with text in them were linked and then unlinked, the text all migrated to the first text box. Pam sized, positioned, and cropped the images in the template; it was pointed out that the size of a Pages document that contains images may be reduced with the Reduce File Size command on the File menu.

Pam placed a frame around one of the graphics and showed how to change the size and color of the frame. She opened the Colors Window by clicking the Color Well in the Format Bar. Here she showed us how to use the search icon (the little magnifying glass) to pick a color from the image



and change the frame to an identical color; she stored the custom color in the palette at the bottom of the Colors window. Two questions popped up: 1) How can a custom color be deleted from the palette; 2) Can anything be done to help remind us where a custom color was used (there are 260 possible custom colors)?

After some experimentation on the part of the Peanut Gallery (many of the attendees brought their laptop computers), we determined a custom color is deleted if you drag a blank square onto the color to be eliminated. Somehow Ron Heck discovered (we think he cheated by consulting the Help Files) the Color Palettes window by clicking on the middle icon near the top of the Colors Window; here you have access to four standard color palettes plus the ability to create and name your own custom palettes with custom colors. This is a tremendously useful capability we did not know iWork '09 has. We can now save a custom color and label it so we can use it again and again in the future.

Since brochures need to be folded somewhat precisely, folding markers should be strategically placed on the brochure. Suggestions made included putting small lines on the document and using periods in carefully

positioned text boxes; in either case, the font can be lightened to make the folding marker less noticeable.

Pam mentioned her preference for creating documents in Full Screen mode and showed how to access menus, thumbnails, and the scroll bar; she also recommended changing the background color to something lighter than the default color.

An attendee pointed out that the Pages keyboard shortcuts for Zoom In and Zoom Out require the Shift key while Zoom in Safari, for example, does not require use of the Shift key.

Our final lesson for the evening involved locking text boxes and images so they are not changed accidentally, grouping text boxes and images so they move together, and combinations of those operations.

The iWork/AppleWorks SIG will meet next at the Penn Lake Library, 8800 Penn Ave. S, in Bloomington. The meeting will commence on October 7, 2009, at 6:30 pm and will conclude by 7:45 pm. Next month Pam plans to show some things about Numbers formulas and the use of Instant Alpha.

OS X Meeting of Sept. 1, 2009

by Bruce Thompson

The OS X meeting was all about Snow Leopard. In case you have been hiding under a rock, Apple introduced Snow Leopard (OS X 10.6) on Friday, August 28, 2009, about a month earlier than had been expected. Bob Demeules, the SIG leader, had it installed on his computer and a couple of the other attendees also had it.

Bob said the install went smoothly and took about 45 minutes. The install process is a little different than in the past. Apple has essentially eliminated the "Archive and install" and the install is now an (extensive) upgrade process. The end result is an operating system that really doesn't look much different but has a number of changes "under the hood." It should be pointed out that Snow Leopard is for Intel-based Macs only.

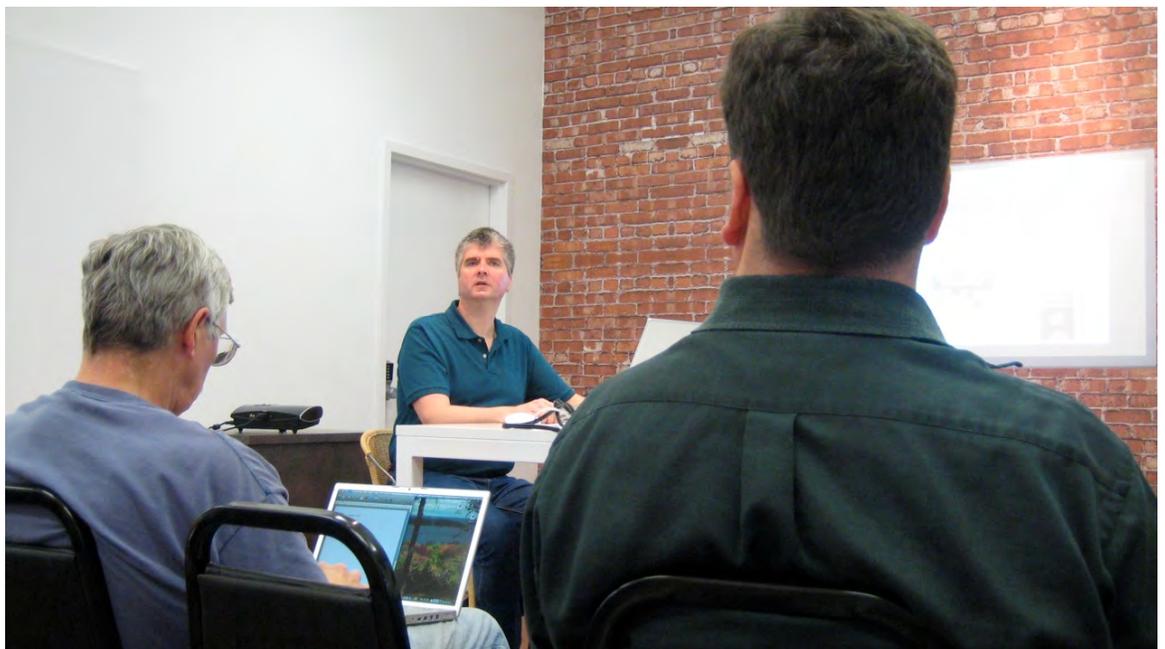
OS X is now nearly a full 64-bit operating system and the installed Apple applications (e.g., Safari and Mail) are now fully 64-bit. While there have been some minor compatibility problems with other applications (see <http://support.apple.com/kb/HT3258> for the latest listing), Bob said he had not run into any problems. If your software is on the list, it will most likely be updated soon. The early release also caught some developers by surprise. Note that the installer does a check to verify that previously installed applications are compatible and isolates those that are not.



Bob went on to describe some of the internal changes for Snow Leopard. One thing that has changed is the amount of space it takes on your disk (less!). The reasons are twofold. First, Apple has changed how they calculate a gigabyte. Where it used to be a gigabyte was defined as 2^{30} (1,073,741,824) bytes, it is now defined as 10^9 (1,000,000,000) bytes. The result is that, while your 200 GB drive showed maybe 180 GB available, it will now show more than 190 GB. You don't really have any more space, it just gets calculated differently.

The other change actually does result in more space. The applications are now stored in a compressed format. The theory behind this is that since processor speed has advanced more than disk read speed, it is faster for the processor to expand the application than it is to read a larger file from disk. Bob noted that it seemed from his limited experience that his laptop was a bit snappier, especially with the Apple applications. *[Editor's Note: Another reason the new OS uses less space is that the PowerPC code has been deleted.]*

While Apple has said all along that this was going to be a performance upgrade and not a features upgrade, there are a few things that have been added. Exposé is now accessible from the dock icon of an application. When you click



on the dock icon of an open application, all windows of that application become available. Also, when a window is minimized into the dock, it can now minimize into the application icon rather than a separate icon on the end of the dock. Apple has added system-wide auto-complete / auto-correct features to Apple applications and they will be added to other applications in the future.

One of the other major changes is to QuickTime. While there are additions to QuickTime X (such as the ability to record and edit screen activity as a movie), there are also limitations such as the inability to play QuickTimeVR. The look has also changed. Whether you like it or not is a personal preference.

Finally, the Rosetta engine (used for some older applications) is not installed by default. You can either install it by clicking the "Options" button at install or, if you are not sure if you need it, it will install "on demand" when an application is launched that requires it.

Bob then went into a complex discussion of how the code was compiled and how it makes better use of the multiple processors. Suffice it to say that Apple has put a lot of time and development effort into making this version of OS X faster, cleaner, and more secure. The meeting then adjourned to the Pie SIG at Perkins.

Q&A SIG of August 2009

By Les Anderson



We had nine people attending including one visitor who joined during the meeting. Some of the discussion centered around a Java Script error in Firefox. The member said he didn't have the problem in Safari.

Another question dealt with setting PowerPoint to automatically advance to the next slide.

We also discussed the need for file backup on your computer. It's a known fact that hard drives fail and data is lost. The easiest way to back up is to use another hard drive. It could be another internal drive or an external drive that connects via USB or Firewire. A high capacity external drive is less than \$100 on sale. Shareware / freeware programs such as Carbon Copy Cloner or SuperDuper make it easy to back up important files. Their programs can be downloaded at www.versiontracker.com.

More Hidden Refinements in Snow Leopard

by [Jeff Carlson](#) and [Glenn Fleishman](#)

Mac OS X 10.6 Snow Leopard doesn't feature many major new features (see "[What's New in Snow Leopard](#)," 2009-08-27), but it does incorporate hundreds of tiny changes that can affect how you use your Mac on a daily basis. Here, we note some refinements that we feel are noteworthy beyond what Matt already covered.

Time for Password — A subtle change in the Security preference pane can affect laptop users. The first option under the General preferences now lets you set an amount of time before the Mac requires a password after going to sleep or engaging the screen saver. In Leopard, the option was simply to require the password or not. Choose among several increments between 5 seconds and 4 hours. [JLC]

Smart Eject — Two of the most irritating long-term problems in Mac OS X have finally been eradicated in Snow Leopard: knowing when the system has ejected a hard drive, thumb drive, disk image, or network drive; and knowing why it sometimes refuses to eject a disk.

Snow Leopard adds a visual cue to let you know an eject is in process: it dims the disk's icon. This lets you know that *something* is happening. When ejection is complete, the disk icon disappears from the Desktop.

If Snow Leopard cannot eject the disk because an application or process is accessing or has open a document on the mounted volume, it displays a dialog that tells you which program or system component is in use. Previously, you'd have to use the `ls -of` command via Terminal and learn to understand the results.

And even better, a Force Eject button lets you override Mac OS X when you believe it's in error or you really need that disk off the Desktop. (Warning! Ejecting disks that are truly in use can corrupt open documents.) [GF]

Bigger iChat Theater — We've always liked iChat Theater, a way to push a presentation,



pictures, or other Quick Look-supported media to a remote party – we use this for presentations with user groups, among other purposes. In Snow Leopard, Apple says you can now push iChat Theater – and any iChat video – at up to 640 by 480 pixels while using as little as 300 Kbps upstream, about a third of the previous requirement for a lower resolution.

Jeff Carlson shared a PDF with me via iChat Theater, and the text was clearly readable. Pages instantly refreshed as he flipped through the PDF on his end. [GF]

Location via Wi-Fi — Apple can now set your time zone via Wi-Fi, most likely using the Skyhook Wireless positioning system that's also part of the iPhone OS. Bring up the Date & Time preference pane, click the Time Zone view, and check the Set Time Zone Automatically box.

A progress spinner shows up while Snow Leopard sends information off about Wi-Fi signals in your vicinity and receives data back. I've seen this both fail and succeed, but usually Mac OS X quickly tells me I'm in Seattle (whew). [GF]

Wake on Demand — Putting your Mac to sleep saves power, but it also disrupts using your Mac as a file server, among other purposes. Wake on Demand in Snow Leopard works in conjunction with an Apple base station to

continue announcing Bonjour services that the sleeping computer offers.

The requirements are complex. You must have firmware release 7.4.2 installed on either an AirPort Extreme Base Station or Time Capsule. If WPA or WPA2 encryption is turned on, the base station can't be in bridge mode. Only newer computers – every 2009 model and at least several 2008 models – can be woken over Wi-Fi; all Macs can be woken via Ethernet. Apple provides [more details in a support note](#), and our Glenn Fleishman [wrote a long article](#) with the ins and outs for Macworld.

You toggle this feature in the Energy Saver preference pane. It's labeled Wake on Network Access for computers that can be roused either via Wi-Fi or Ethernet; Wake on Ethernet Network Access or Wake on AirPort Network Access for wired or wireless only machines, respectively. Uncheck the box to disable this feature. [JLC]

Exposé Shortcuts — As one of the few feature changes in Snow Leopard, you've probably seen how Exposé now works from the Dock, arranges windows in an easier-to-read layout, and enables you to move content between applications. Here are a few shortcuts that will make Exposé even more useful:

- With all windows visible (press F9 or the Exposé key [F3] on recent Mac laptops), press Command-1 to arrange the windows by name.
- Also with all windows visible, press Command-2 to arrange them by application.
- Press the Tab key to view all windows belonging to one application (equivalent to pressing F10 or Control-F3 on recent laptops). Press Tab again to switch between applications while remaining in Exposé. You can also click an icon in the dock.
- Hover your mouse pointer over a window and press the spacebar to view a larger Quick Look version of that window. [JLC]

iCal's New Inspector — Admittedly, this new feature feels more like a workaround hack than

a solution, but we'll take it. The Leopard version of iCal made editing events more difficult than in the Tiger version. To view details about an event, for example, you must double-click the event to reveal only some information in a pop-up box; you then need to click the Edit button (or know to press Command-E) to edit an item's information. In contrast, iCal in Tiger provided an optional drawer to reveal and edit those details. In Snow Leopard, choose Edit > Show Inspector (or press Command-Option-I) to bring up a floating Inspector that provides an editable view of any items selected in your calendar. [JLC]

Screenshots Named Better — Gone are the inscrutable "Picture 1" files on your Desktop. Snow Leopard instead names screenshots taken with the built-in screenshot feature along these lines: "Screen shot 2009-08-31 at 12.57.39 PM." Wordy, but it gives you a slightly better sense of what might be inside. [GF]

240 Pages of Snow Leopard Details — Available the day that Snow Leopard was released, Jeff Carlson's latest book, "[The Mac OS X 10.6 Snow Leopard Pocket Guide](#)," includes details like these as well as a great overview of Mac OS X, all in just 240 pages of clear text and screenshots. The book retails for \$14.99, and is available in bookstores and at Amazon.com (currently discounted to just \$10.19). (A downloadable excerpt should be available from [Peachpit.com](#) by the time you read this.)

Tip of the Iceberg — As we mentioned above, these changes are merely the hidden refinements that jumped out at us right away and demanded to be trumpeted to our readers. To learn more about other tweaky changes straight from the cat's mouth (some of which are useful; others of which are merely marketing points), check out Apple's [Snow Leopard Enhancements and Refinements](#) page.

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Peering Inside Snow Leopard Security

by [Rich Mogull](#)

From the beginning, Apple made it clear that Mac OS X 10.6 Snow Leopard was focused on improving the performance of the operating system and providing developers with new tools for harnessing the power of modern hardware and multiprocessor systems. The included security-related changes are no different, and for the most part are completely invisible to the user.

These changes provide new tools to assist programmers in producing more secure applications and harden the core operating system, which will result in a safer computing experience for most Mac users.

Despite these improvements, Apple missed a major opportunity to include a key operating system feature that could nearly wipe out a entire category of attack.

Securing Memory and the Power of 64-Bit Security — The changes I describe here are fairly subtle and technical, so those of you who don't care about things like stack versus heap memory might want to skip to the next section.

The most significant single improvement is that the operating system has now been compiled with stack memory protection by default. Essentially, this places what's known as "canaries" in stack memory: fixed values in fixed locations that are pushed around if an attacker uses a buffer overflow attack, enabling the operating system or program to detect attacks.

(Buffer overflows happen when input values to a program – something as simple as a URL entered in the location field of a browser – is larger than expected. The data that overflows can be used to crash software or a system, or gain privileged access.)

Stack memory protection makes an entire class of buffer overflow attacks much more difficult to exploit, even when a software vulnerability is present. Developers will need to enable it for their

own applications, but by default, Apple uses this feature everywhere it can to limit attacks.

A second overarching improvement is the migration to 64-bit applications and components throughout Snow Leopard. While Apple touts 64-bit support largely for its speed boosts and to enable memory-hungry applications to address more memory, the Intel CPU architecture offers substantial hardware security capabilities that generally aren't available in 32-bit environments.

While Snow Leopard includes both 32-bit and 64-bit kernels, it's possible for a 64-bit capable Mac to boot with the 64-bit kernel only under Mac OS X Server 10.6 – Snow Leopard Server. When running Snow Leopard Server, the 2008 and 2009 Xserves and Mac Pros boot the 64-bit kernel by default; the 2008 and 2009 iMacs are capable of booting the 64-bit kernel in Snow Leopard Server, but must be placed in that mode by holding down the 6 and 4 keys at startup. Apple posted [a Knowledge Base article](#) with details about accessing the 64-bit kernel in Snow Leopard Server, but it has offered nothing yet for the regular version of Snow Leopard.

Wherever possible, Apple appears to try to use new security technologies for Snow Leopard on 32-bit systems, but most of the real security advantages are possible only when running 64-bit software on 64-bit hardware.

One of the key areas in which this prevents trouble is in the heap memory, where Apple uses a combination of technologies: one leverages 64-bit hardware, while the others are software enhancements. (The heap is a pool of free memory that applications can dynamically use on a temporary basis, as opposed to the more-structured and static stack memory.)

When programming an application, heap memory locations that should only accept data can be marked as non-executable, and this will be enforced by a 64-bit processor (similar hardware protection has been used since Mac OS X 10.4 Tiger for stack memory on 32-bit

processors). This, again, increases the difficulty of heap-based memory exploits, which are a common form of attack.

Apple further hardened the heap through use of stronger heap checksums to detect when someone has tried to modify a portion of memory. Combined with a related feature that terminates processes if it detects double null bytes where they shouldn't be, this approach doesn't eliminate all heap based memory attacks, but makes the life of the attacker much more difficult.

A final advantage of the move to 64-bit code is that applications now move data around more securely, skipping the stack completely. Function arguments are passed via registers, which, again, complicates the life of an attacker trying to attack your Mac using memory corruption techniques.

Sandboxing and Safari Enhancements —

Sandboxing is the process of restricting what kinds of activities an application can perform. For example, you can sandbox an application so it can read files, but not write them, or restrict it from accessing the network. It's a great way to limit the damage if an attacker is able to exploit an application on your Mac, since they'll be stuck in the sandbox.

Apple provides sandboxing services that any developer can use, and has slowly been increasing the number of Apple applications that implement sandboxing through software updates. Apple continued this trend with Snow Leopard, sandboxing a number of new applications and features. One example is the x264 codec for handling H.264 video, which will make it harder for attackers to build malicious video files designed to corrupt your video player and allow them to exploit your Mac (a not-uncommon attack vector).

There's been discussion over increased sandboxing in Safari, but that's not quite how Apple improved browser security and stability. Instead of trying to sandbox browser plug-ins

within Safari, Snow Leopard now runs them as separate processes. That way if a plug-in crashes, it doesn't crash your entire browser. (In fact, Apple told us that browser plug-ins are the number one cause of crashes in Mac OS X, so making them independent processes should increase general reliability as well.)

Running browser plug-ins as separate processes improves security more than just increasing sandboxing, because Safari includes support for a legacy requirement that allows the use of a somewhat less-secure version of a common programming function called malloc that's important for memory management. These plug-ins now run using the more-secure version of malloc used by the rest of Snow Leopard. By separating plug-ins into separate processes, developers potentially have more opportunities to add sandboxing to their plug-ins.

Some WebKit-based plug-ins still run within the main Safari process, but most of the major plug-ins have migrated to this new architecture, improving security and stability.

A New Firewall Setting — With Leopard, Apple introduced a new firewall capable of restricting inbound access to specific applications, not just network ports and protocols (see "[Leopard Firewall Takes One Step Forward, Three Steps Back](#)," 2007-11-05). In Snow Leopard, Apple implemented a minor default usability change some users will want to disable.

You can find the settings in the Security system preference pane in the Firewall view, which now provides just a Start or Stop button. If you click the Advanced button, the settings are nearly identical to those in Leopard, but with one minor change: a new checkbox allows signed software to receive incoming connections automatically.

This setting allows applications signed by a valid certificate authority – the same authorities that sign Web pages for secure SSL/TLS sessions – to receive incoming connections with no additional steps. Previously, you would have

had to add the application or approve a firewall exception when Leopard noted the application trying to set up the incoming connection.

This bypass was likely included to reduce the number of dialog boxes users need to click when installing software from known companies. Don't worry: even if a program is allowed by default you can still manually change the setting to block access.

Users who want more control over their security should disable this setting, since anyone willing to pay the money can purchase a code signing certificate. Just because a program is signed doesn't necessarily mean you want it to accept incoming connections.

New Malicious Software Protection — Back in Mac OS X 10.4 Tiger, Apple introduced a new File Quarantine feature. Enhanced again in Leopard, it displays a warning the first time you run any file that was downloaded using common Internet programs like Mail, Safari, and iChat.

In Snow Leopard, File Quarantine now checks these programs to see if they contain certain malicious software, which is sometimes hidden in downloads to trick users into installing it. If the file is infected, you'll see a new warning that explicitly warns you the file is dangerous.

Right now, according to [reports on the Internet](#), the feature only checks for two known types of malicious software. Apple has stated that additional checks can be added using the normal Software Update approach if needed.

This doesn't mean that Apple has added antivirus software to your Mac. Using File Quarantine will protect you from running a few specific instances of malware downloaded using standard programs, but won't catch other malicious files, such as any transferred via USB drive. The feature also won't necessarily protect you if an attacker exploits your Mac, such as through a Web browser vulnerability, and then uses that toehold to install additional malicious

software. And it can't remove the infection from compromised files.

The initial version offers Apple a great capability to push out protection to users in case a larger infection starts to propagate. (For detailed information on how the enhanced File Quarantine feature works, we recommend [Dan Moren's excellent article at Macworld](#).)

A Missed Opportunity — One major disappointment in the midst of all these security enhancements is that Apple did not improve the Library Randomization feature introduced in Leopard. Also known as ASLR, and found in Windows Vista and Windows 7, it's a powerful operating system security technology that nearly eliminates the memory-based attacks we've spent so much time talking about.

Library Randomization picks different memory locations for key operating system components each time the system starts up. Even if an attacker exploits a vulnerability on your system, it is nearly impossible for them to tie into the operating system and actually do anything malicious (or otherwise) because they can't rely on where the hook can be found.

Library Randomization in Leopard and Snow Leopard does shift around some important pieces of the operating system, but leaves the memory location of one key component static across all Macs (dyld, the dynamic loader). With dyld in place, an attacker has a roadmap to continue their exploitation and potentially take over your system.

Randomizing the location of dyld is no small task, but Apple had a perfect opportunity to make the change with Snow Leopard, since so many other important parts of the operating system were being updated. Combined with the 64-bit enhancements, it would make memory exploitation of any type extremely difficult and provide years of worry-free Mac computing.

Continually Improving Security — Snow Leopard also includes a few other small

changes. Users concerned with privacy can disable location services in the Security preference pane (in the General view, check Disable Location Services). As on the iPhone and iPod touch, location services allow your current coordinates – derived via Wi-Fi signals as well as future GPS hardware – to be used by system components and third-party software. Date & Time, for instance, now uses Wi-Fi signal snapshots to set your time zone automatically.

Apple also increasingly phased out the use of the setuid function in the operating system, which reduces security by running processes under administrative or other user accounts.

It's important to remember that Apple has gradually been enhancing security, sometimes with major enhancements, through Software Update long before the release of Snow Leopard. Sandboxing, increased stack memory protection, reducing use of setuid, adding anti-phishing to Safari, and a series of other changes have found their way onto our Macs outside of major operating system version updates.

Overall, Snow Leopard is more secure than Leopard, although Mac users on 32-bit processors won't see all the benefits.

Still, I am extremely disappointed that Apple failed to complete Library Randomization. Microsoft has experienced significant real-world security benefits with their adoption of ASLR, and had Apple taken this step they would have practically eliminated memory-based attacks like buffer overflows.

Although most of the security enhancements in Snow Leopard are hidden deep within the operating system, they should provide practical benefits to all Mac users on 64-bit architectures. While the only true test of security is how effective it is in the real world, on paper it looks like life is now at least a little harder for any potential Mac attackers.

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iTunes 9 Refines Crowdsourcing and Sharing Features



iTunes 9
Free for Mac + PC

by [Adam C. Engst](#)

At the special Rock and Roll event today [Sept. 8, 2009], Apple unveiled a new version of the near-ubiquitous media application [iTunes](#). The latest version introduces a variety of features, including some that respond to user requests and others that are clearly just what Apple (or Steve Jobs, who was back on stage with a much younger liver) wants to see.

As usual, Apple touted the success of the iTunes Store, boasting about how it's now available in 23 different countries and hosts over 100 million iTunes accounts. Those users have purchased 8.5 billion songs so far, making iTunes one of the largest stores on the Web, and the top music retailer in the world.

It will take some time with the software to wrap our heads around the new features in iTunes, since Apple's demo of them was relatively brief, but they include the following:

- **Genius Mixes:** With the Genius feature of iTunes having processed 54 billion songs from 27 million libraries, Apple has accumulated a massive database of user information. The company has now tapped that information to create Genius Mixes, which makes up to 12 endless mixes of songs that go well together. It may be as close as you get to being like author [Stephen King](#) and owning your own radio station that plays only music you like.
- **Improved Syncing:** We imagine there will be additional details about this to ferret out, but Apple claims to have improved syncing with a new Music tab that lets you choose playlists, artists, or genres for automatic syncing. Previously, that required setting up smart playlists. Plus, the Photos tab will let you sync events and faces from iPhoto.

- **App Arranging:** Tired of dragging icons around on your iPhone or iPod touch? Us too. Luckily, that won't be necessary any more, since iTunes 9 enables you to arrange apps – and entire screens – on your Mac, where it's a much more fluid environment. About time!
- **Home Sharing:** Here's another potentially major feature that will require some exploration. In the past, iTunes has allowed you to "share" libraries with other users on your network, but that sharing involved only the streaming of music. You couldn't copy songs around, rate them, add them to playlists, or anything else useful. The new Home Sharing feature does away with those limitations, for up to five computers on your local network. Most notably, you'll be able to copy songs, movies, TV shows, and even iPhone apps from other computers on your network.
- **iTunes LP:** Luckily, the TidBITS audience understands what an LP is, so we won't have to offer a history lesson like all the fanboy sites. The point of the iTunes LP feature is to provide lyrics, photography, liner notes, and more – all the sorts of things that artists did for record albums because they had the space. Those details largely went away with CDs, and have fallen almost entirely by the wayside with digital music. The question is whether the iTunes LP content will be compelling for customers, or if it's more designed to involve artists in the iTunes Store – bringing them into the Apple orbit, as it were. Plus, because iTunes LP content is available only with album purchases, it may help assuage artist concerns about iTunes selling mostly individual tracks, rather than entire albums. It's unclear whether or what the upgrade cost will be for those who already own albums that get the iTunes LP treatment.
- **iTunes Extras:** Where iTunes LP brings extra album content to music, iTunes Extras brings additional materials to movies. This may enable iTunes to compete better with DVDs

from Netflix, for instance, for those people who enjoy watching all the extra content. As with iTunes LP, it's not yet clear what the upgrade cost will be (or if it will be available) for those who previously purchased movies that now offer extras.

- **Redesigned iTunes Store.** We seldom comment on the design of the Apple Web site, and similarly, the design of the iTunes Store doesn't feel like the sort of thing that requires coverage and analysis. Apple says they've made new artist pages, new movie pages, new TV show pages, improved navigation, and an overall cleaner layout.

As always, iTunes 9 is free, and is available now as a [82.8 MB download](#); it should appear in Software Update soon. It requires Mac OS X 10.4.11 or later, although the iTunes LP and iTunes Extras features need Mac OS X 10.5 or later. It does work on older PowerPC G4- and G5-based Macs, but with some limitations for video playback.

Apple also released [iTunes 8.2.1](#) for PowerPC G3-based Macs; it's a 77.3 MB download and presumably has been updated purely for compatibility with Apple's back end infrastructure and new hardware.

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Hot Links of the Month

Compiled by Ron Heck

Editor's Note: Since the biggest news of the month is clearly the release of the new Mac OS, the next page and a half is dedicated to all things Snow Leopard.

Mac OS X 10.6 Snow Leopard



Installing Snow Leopard: What you need to know | MacWorld

<http://tinyurl.com/p5j899>

How-To: Upgrade To Snow Leopard — The Right Way | Cult of Mac

<http://tinyurl.com/kqx5yn>

Review: Snow Leopard | MacWorld

<http://tinyurl.com/kqt2vv>

Apple Mac OS X Snow Leopard | CNET

<http://tinyurl.com/nmv2fe>

Apple Changes Leopard's Spots | Wall Street Journal

<http://tinyurl.com/m489wx>

Mac OS X 10.6 Snow Leopard: the Ars Technica review | Ars Technica

<http://tinyurl.com/mm5fn4>

Review: Apple Snow Leopard a speedy no-brainer upgrade | Chicago Sun-Times

<http://tinyurl.com/kj9uxt>

Snow Leopard Review: Lightened and Enlightened | Gizmodo

<http://tinyurl.com/mmygug>

What's New in Snow Leopard | TidBits

<http://db.tidbits.com/article/10504>

Inside Mac OS X Snow Leopard: 64-bits | AppleInsider

<http://tinyurl.com/mp7p39>

Snow Leopard's smaller changes | MacWorld

<http://tinyurl.com/q4jpv>

Snow Leopard: QuickTime X | MacWorld

<http://tinyurl.com/kturjq>

Inside Mac OS X Snow Leopard: QuickTime X | AppleInsider

<http://tinyurl.com/nmd2zd>

Giz Explains: Snow Leopard's Grand Central Dispatch | Gizmodo

Under the hood is a feature called Grand Central Dispatch which helps the computer manage multiple tasks. Gizmodo provides a detailed analysis of GCD.

<http://tinyurl.com/lbyeo4>

15 Snow Leopard Tricks You Have to Try | Gizmodo

<http://tinyurl.com/mlpo2t>

Services step out in Snow Leopard

The often overlooked Services feature that was already a part of the Mac OS received a new look.

<http://tinyurl.com/krses2>

How to create a Service in Snow Leopard

MacWorld

<http://tinyurl.com/r6choy>

Snow Leopard's old and new annoyances

MacWorld

<http://tinyurl.com/ldldsb>

Hot Links of the Month (continued)

Snow Leopard (continued)

Everything You Wanted To Know About Apple's New Anti-Virus Spotter | Cult of Mac

<http://tinyurl.com/m8rdvm>

Reveal hidden menu bar icon functions in Snow Leopard | MacWorld

<http://tinyurl.com/lgrwm5>

Snow Leopard: What's gone where | MacWorld

<http://tinyurl.com/pv6fjn>

Snow Leopard's System Preferences shuffle | MacWorld

<http://tinyurl.com/mp4emk>

A Closer Look at Snow Leopard's Wake on Demand Feature | MacRumors

<http://tinyurl.com/lx77x8>

How to use text substitution in Snow Leopard | MacWorld

<http://tinyurl.com/o54u9f>

Snow Leopard versus Windows 7 | MacWorld

Hot on the heels of Snow Leopard, Microsoft will release its new OS called Windows 7. MacWorld examines how they match up.

<http://tinyurl.com/ko5nmd>

OS deathmatch: Snow Leopard vs. Windows 7 | Computerworld

<http://tinyurl.com/ldegfc>



iPod/iPhone/iTunes

iTunes 9 Review | Macworld

<http://tinyurl.com/mpoe6s>

Instant Expert: Secrets & Features of iTunes 9 | iLounge

<http://tinyurl.com/pwazw2>

5 ways to listen to music on the iPhone without using iTunes | Ars Technica

<http://tinyurl.com/kuab2z>

Instant Expert: Secrets & Features of iPhone 3.1 | iLounge

<http://tinyurl.com/knvof6>

Apple's fifth take: Ars reviews the iPod nano with video | Ars Technica

<http://tinyurl.com/nsdbxk>

Apple rivals DVD with new iTunes Extras for movies and albums | AppleInsider

<http://tinyurl.com/n5pund>

iPod Nano 5th Gen Review | Gizmodo

<http://tinyurl.com/qktlj4>

Fifth-generation iPod nano Review | Macworld

<http://tinyurl.com/q2yow2>

Miscellaneous

Parallels Desktop for Mac Targets "Switchers" with Special Edition | Cult of Mac

<http://tinyurl.com/qdtuj2>

Save money with your Mac | Macworld

<http://tinyurl.com/l67w7e>

MobileMe proving to be valuable to theft victims | Ars Technica

<http://tinyurl.com/nzu5lq>

Everything you ever wanted to know about MacHeist | Edible Apple

<http://tinyurl.com/pwzmsq>

Members Helping Members

Need Help? Have a question the manual doesn't answer? Members Helping Members is a group of volunteers who have generously agreed to help. They are just a phone call or an email away. Please call only during the appropriate times, and **only if you are a current mini'app'les member** and own the software in question.

Apple II / IIGS Software & Hardware	1, 2	Microsoft Excel.....	2, 5, 7
AppleWorks / ClarisWorks.....	3, 4	Microsoft Word	2, 7
Classic Macs		MYOB	5
Cross-Platform File Transfer	2, 3	Networks	
FileMaker Pro		New Users	1
iMacs		PhotoShop	
Intel-Based Macs		QuarkXPress.....	7
iPhoto	3	Quicken.....	5
iTunes / iMovie		QuickBooks and QuickBooks Pro	5
iWork	4	VectorWorks.....	6
Mac OS Classic.....	3		
Mac OS X			

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5. Ardie Predweshny	612-978-9774		DEW
6. Charles Radloff	952-941-1667		D
7. Ron Heck	651-774-9151	ronheck@comcast.net	DEW

D = Days, generally 9 am to 5 pm

E = Evenings, generally 5 pm to 9 pm

W = Weekends, generally 1 pm to 9 pm

Please call at reasonable hours and ask if it is a convenient time for helping you. By the way, many of these volunteers can also be contacted on our forums. We appreciate your cooperation.

mini'app'les needs more volunteers for Members Helping Members — If you are willing to be a Members Helping Members volunteer, please send an email message to Membership Director Les Anderson or contact him on our forums with your name, telephone number, contact hours, and the software and hardware areas you are willing to support.

mini'app'les Membership Application and Renewal Form

Membership cost is \$15.00 for one year. Please make your check payable to "mini'app'les".

Name: _____

Company (if mailed to): _____

Address: _____

City, State, Zip: _____

Phone # (home): _____

Phone # (work): _____

Phone # (cell): _____

Occupation (if applicable): _____

Membership ID # (if renewal): _____

Email: _____

Your email address will NOT be sold, shared, or distributed. It will be used only for official mini'app'les business such as distribution of the newsletter and membership renewal reminders.

_____ Check if this is a change of address notice

_____ Check if you want to volunteer

_____ Check if you want to be added to "Members Helping Members"

_____ Check if you were referred by a club member (if so, please give member's name)

Please mail this application and your payment to:

mini'app'les

P.O. Box 796

Hopkins, MN 55343-0796

Thank you for your support!

Benefits of mini'app'les Membership

- Access to the mini'app'les online forums. Post questions and/or answers about issues, trouble shooting, products, buying and selling, special events, discounts, and news about Apple and the mini'app'les club.
- Access to our Members Helping Members network of professional and advanced users of Apple technologies. These members volunteer their time to help other members with software, hardware, and other Apple related issues.
- A variety of Mac Special Interest Groups (SIGs) that meet each month.
- Multi-SIG meetings and workshops to help members with computer problems. You can bring your equipment to these events and receive support from knowledgeable Mac users to help diagnose your problem(s).
- Participation in drawings for computer hardware, software, and other computer related materials.
- Discounts from vendors and manufacturers. Refer to the on-line forums for current offers.

mini'app'les

the minnesota apple computer users group, inc.

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Questions — Members with technical questions should refer to the Members Helping Members section or bring their questions to an appropriate SIG meeting. Please direct other questions to an appropriate board member.

Dealers — mini'app'les does not endorse specific dealers. The club promotes distribution of information that may help members identify best buys and service. The club itself does not participate in bulk purchases of media, software, hardware, and publications. Members may organize such activities on behalf of other members.

Newsletter Contributions — We welcome contributions from our members. Please send contributions directly to our post office box (mini'app'les, PO Box 796, Hopkins MN 55343), email them to miniapples@mac.com, or email them to the newsletter editor at ronheck@comcast.net

The deadline for material for the next newsletter is the fifteenth of the month. An article will be printed when space permits and, if in the opinion of the Newsletter Editor or Publications Director, it constitutes material suitable for publication.

This newsletter was produced using Apple's Pages word processor.

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