

## According to Hoyle...

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### WWDC '06 Round Up

by Jonathan Hoyle

[jhoyle@maccompanion.com](mailto:jhoyle@maccompanion.com)

*macCompanion*

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This past month, Apple held its annual Worldwide Developers Conference (WWDC), a week of presentations, feedback forums and lab time for the Macintosh developer to be prepared for what is on the horizon. WWDC is certainly the most important conference of the year to any Macintosh developer, and it is the one I look forward to most. At WWDC '04, Apple announced Mac OS X 10.4 Tiger; at last year's conference, they dropped a bombshell by announcing the transition to Intel. This year, it is back to operating systems again, with the announcement of Mac OS X 10.5 Leopard, due to be release this coming spring.

#### What We Can & Can't Tell You

Attendees at WWDC '06 have signed a non-disclosure agreement, preventing us from sharing any protected Apple technology. Fortunately, that covers only the nitty-gritty details we obtained from the conference. All of the high level information about Leopard found on Apple's web site <http://www.apple.com/macosx/leopard/> or spoken of in Steve Jobs' keynote address, is not covered under NDA and thus can be spoken of freely. Steve's keynote is perhaps the best introduction to what is becoming available in Leopard and is publicly available for anyone to view. If you have not done so yourself, take the time to watch it here:

[http://events.apple.com.edgesuite.net/aug\\_2006/event/index.html](http://events.apple.com.edgesuite.net/aug_2006/event/index.html)

#### Power Macintosh RIP: 3/14/94 - 8/7/06

As the rumor mills suggested would happen, the Power Mac G5, the last of the PowerPC-based Macintoshes, was discontinued at WWDC. For a little more than 12 years, the PowerPC microprocessor has served the Macintosh community well. However, with neither Motorola nor IBM stepping up to the plate to make necessary improvements to keep up with the industry, it was time for Apple to move on. Replacing the Power Mac G5 is the new 64-bit Mac Pro featuring the Intel Xeon "Woodcrest" processor. This impressive machine features two Dual Core processors, thus giving quad processor performance, at speeds of 2.0, 2.66 or 3.0 GHz. And being 64-bit, the Mac Pro will be able to take advantage of Leopard's 64-bit capabilities.

#### Mac OS X 10.5 Leopard Top X

In the WWDC keynote address, Steve & Co. list 10 new features in Leopard:

- I. 64-Bit: Top to Bottom
- II. Time Machine
- III. Complete Package: Boot Camp, Front Row, Photo Booth, etc.
- IV. Spaces (virtual desktops)
- V. Spotlight
- VI. Core Animation
- VII. Universal Access
- VIII. Mail
- IX. Dashcode & WebClip
- X. iChat

Admittedly, some of these "features" are more impressive than others. Many of these are simply updates to current software or shareware that become part of the operating system. There are a number of articles available to read on each of these ten items, but I would like to discuss only four of them, as I see that these are the most important ones:

*I. 64-bit:* In Mac OS X 10.4 Tiger, 64-bit compilation became available for the underlying Unix-level. This allowed developers to create 64-bit console applications, and even 64-bit dynamic libraries which could be called from standard 32-bit GUI applications. Such code would run on only Mac OS X 10.4 and higher, and only on the PowerPC G5-based Macintoshes. These 64-bit programs will not run under Rosetta on Intel-based Macintoshes. Beginning with Mac OS X 10.5 Leopard, 64-bit compilation becomes available "top to bottom", that is: 64-bit Unix through 64-bit Core Foundation to 64-bit Carbon and Cocoa API's. This means that Xcode 3 can compile Universal Binaries containing up to FOUR architectures: 32-bit PowerPC, 32-bit Intel, 64-bit PowerPC and 64-bit Intel. 64-bit compilations will, of course, run only on 64-bit hardware, such as the PowerPC G5 or Intel Xeon.

*II. Time Machine:* This was, for me, the most impressive new technology available in Leopard. The difficulty of maintaining back-ups and recoveries has made it nearly impossible to do properly. With Time Machine, backing up and restoring becomes effortless, and it is one of the main reasons I am looking forward to upgrading to 10.5.

*VI. Core Animation:* Building upon CoreImage and CoreAudio, CoreAnimation simplifies the intricacies of animation, bringing amazing power to the developer. The Core Animation API is very impressive, and the Time Machine GUI is written with CoreAnimation.

*IX. Dashcode & WebClip:* Dashcode is the "Xcode for Dashboard Widgets", with a large number of templates and a full JavaScript editor and debugger. This takes Dashboard development up to first class citizenship, making development fun again. WebClip is another Dashboard development tool, but not meant for the developer but instead for the end user. Essentially, a user can clip a portion from any web page and paste it into its own Dashboard widget with very little effort. Both of these tools truly empower the Macintosh web user to incredible levels.

## **The Week**

From Tuesday through Friday afternoon, the conference sessions were heavily attended, as 2006 broke the previous year's attendance record. Over 4200 developers, representing 48 nations, were in attendance. This year, WWDC had eight tracks running concurrently, covering everything from application technologies to graphics and media to development tools, and much more. In addition, over 100 labs were scheduled so that developers could test their products on site.

## **Evening Events**

Apple hosted a special event each night of the conference. Sunday evening was the Student Developer Reception where students could meet and give resumes to a number of different companies. This year's reception was fairly well attended, with all the usual suspects availing themselves to the student population, placed at various tables throughout the banquet hall. The Google table was always busy, especially with their recent announcement of opening a new branch in Ann Arbor, Michigan. Microsoft's Geoff Price, who heads up the impressive Macintosh Business Unit team, was also there doing well with students. The MathWorks, makers of MATLAB, was drawing a bit of excitement as well. Eastman Kodak was represented there, both from Rochester, New York and Vancouver, Canada. Students looking to make the Macintosh part of their professional careers did very well by attending this reception.

Monday night was the general Apple Developer Connection Reception, in which food and drinks were served and Apple employees mixed with the crowd. There I chatted with Rob Kehrer from Apple's Worldwide Developer Relations, who spoke proudly of the tremendous growth the Mac has experienced in the SciTech arena. Growing in size geometrically, the scientific world seems almost giddy to embrace Mac OS X. Most developers I saw there seem relatively pleased with this year's keynote and first day's events.

Tuesday was a double-barreled evening of events. After pizza being served, the first event that night commenced with the impressive Apple Design Awards, hosted by User Experience Technology Manager John Geleynse and Shaan Pruden, Director of Partnership Management. Geleynse (also known as *Aquaman* for his expertise in Aqua) was particularly entertaining, as he made it a point to demo each winner in turn. Following the Awards, the infamous Stump the Experts contest was held, which pitted the general audience against a stage full of Apple experts. Some questions are straightforward while others are tricky. My favorite question, submitted by an audience member to the Experts read: "Which Macintosh has the dubious distinction of having the shortest lifespan?" The Experts' answer was the Macintosh IIx, with a market-life of just under 4 months. Surprisingly, this correct answer was in fact: the newly introduced Mac Pro, with a market-life of 2 days (and counting). The audience and experts alike roared with laughter.

Wednesday evening also had two events running. One was the Scientific Poster Session, the first ever held at WWDC. The speed with which scientific applications have been embracing Mac OS X is absolutely astounding. It is certainly a great time to be a Macintosh user, especially for those in the tech and biotech worlds. In addition to this, Apple held encore presentations of some of the more popular sessions so far that week, so that those who missed them could get a second chance. With eight concurrent tracks running, it was inevitable that you would miss a session you wanted to see just so you could attend another. These encore presentations were well appreciated.

Thursday was the final evening of the conference, and Apple capped it off with its annual Campus Bash. Buses appeared outside the conference building, loading up developers to transport them from San Francisco to Cupertino, home of Apple Computers. Developers enjoyed the music and food available on campus, and many lined up to get into the Apple Campus Store, with extended hours for WWDC. For those more technically minded, the Campus Bash also hosted the ADC Plugfest, where developers could test their USB, Firewire or Wi-Fi products against Apple's machines on campus.

## **Conclusion**

WWDC has come and gone for another year. How does it rank with previous WWDC's? Well, it wasn't the best but it wasn't the worst either. The food was at an all-time low, and third party developers were almost invisible. However, with access to Apple employees and labs, and a real workable Leopard release to test with, there was still a very much upbeat spirit this year. WWDC '06 did not have the tumultuous upheaval of last year's announcement, but this year's "evolution instead of revolution" deliveries made most everybody very happy. My grade for WWDC '06: **B+**.

**Next Month:** Return to Cross-Platform frameworks.