

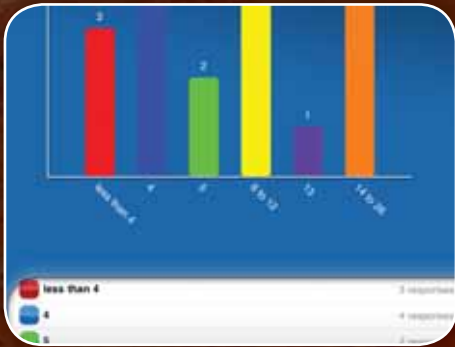
MIND

Wheels for the

**MACS in
NEWCASTLE**



**CLASSROOM
iPADS**



**WWDC
WRAP**



Mapping beyond 3G



**WIN AN
IPOD
NANO**

FREE COPY



A TV on every Mac

The Elgato name is synonymous with Mac TV tuners, but what do you do if your Mac isn't near an antenna point? If the paltry external antenna isn't cutting it, EyeTV Netstream can help. The small box plugs into your TV point and your network, providing two HDTV tuners providing feeds that can be watched on any wired or wireless Mac, iPhone, iPod touch, or iPad in your house – or even over the Internet. At \$399.95 it's cheaper than a second TV, and you get all the EPG and PVR features of the EyeTV software as well.

<http://bit.ly/cSvJCU>



RedEye's universal appeal

If you have more remotes in your TV room than people, it's time to think about consolidating. But before you rush out to buy an expensive universal remote, consider the RedEye Mini. This tiny infrared transmitter plugs into the headphone jack of your iPhone, iPod touch or iPad and lets you control any infrared-controlled TV, DVD player, computer, games console, or other device. Design your interface in the app, plug in the \$99 device, and away you go www.ozhifi.com/redeye.html



You write, it records

Taking notes may never be the same again. The Echo 'smart pen' works without a computer, recording everything you write and/or say. Use the bundled software to download and play your notes and audio on your Mac or PC, then export them as PDF, audio file, or a Flash video of your writing. The pen includes 8GB RAM – enough for 800 hours of audio – and can be customised with apps like dictionaries, translators, games, and more. \$299.95. <http://www.livescribe.com/au> or <http://store.apple.com.au>



Big sound, for the road

Tired of the sound from your iPhone's little mono speaker? Consider iHome's iHM79 rechargeable speakers, which not only travel with you but collapse on themselves to save space. Magnetic bases keep them stuck together while you're travelling, but once you unhook them and twist open these \$79.95 speakers they deliver the goods in stereo and louder-than-expected bass.

<http://bit.ly/bscsQv>



A drummer, without the noise

If you're into music but not so much into drummers, iZotope's iDrum Virtual Drum Machine may be your answer. This app comes with over 500 percussion samples and integrates with GarageBand, Logic, Digital Performer, Ableton, Live 4, and other apps or runs on its own. Create your own drum kits or use over 200 built-in kits, with highly-granular control over the instruments and multiple channels for filters and audio controls. There's an iPhone/iPod touch version too. <http://bit.ly/aZpdDg>



Looks like a book, holds your iPad

iPad cases are a dime a dozen, but this one is so clever we had to mention it. Twelve South, which also makes the useful BookArc for iPad stand (<http://bit.ly/bxGGKX>), has designed this \$129.95 book-styled iPad case to look just like a hard-worn leather-bound book. There's a spine label, bookmark-looking leather pulls, protection inside and out, and the ability to stand it upright to watch movies or photos. A perfect disguise for your iPad on campus; just don't misplace it in the library or it could end up getting reshelved.

http://twelvesouth.com/products/bookbook_ipad or www.tryandbyte.com.au

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Editor: David Yammouni **Editorial:** David Braue, www.braue.com

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EDITORIAL



Welcome to the Spring edition of *Wheels for the Mind*. We have some wonderful articles for you, starting with our comrades in New Zealand – who have re-ignited the AUC spark in the Land of the Long White Cloud. AUT have

launched their AUC presence with a bang, and we're delighted with the positive reviews.

Next, we head to the desert for a fascinating look at the way innovative staff at Charles Darwin University are using stored data, the iPhone and its GPS to map out the red centre of Australia.

The University of Newcastle has made a bold move, completely converting to Mac in its Faculty of Science and IT. This sees over 4,500 staff and students as well as 11 computer labs moving solely to the Apple platform. The use of virtualisation software ensures that they have all the bases covered, and their approach seems to be paying off.

Once again, Zac Cohan and Nik Youdale of Acqualia Software have come up trumps with an improved version of Souolver. As an added bonus, they have very kindly offered AUC staff and students a free copy; check out page 9 for details. It is great to see all the effort the boys have put into Souolver finally paying off, and also how they're giving back to the AUC community. Thanks guys – you're legends!

We then move west to the University of Western Australia and read about how a Computer Science lecturer has challenged his students with real world scenarios for software development and testing. Dr. Chris McDonald wanted to impress upon them how unexpected problems can blindside you – and they learned this first-hand while testing their software in the 'not so perfect' wireless world.

Nick Faulkner chats with us about how he's using iPads and iPod touches to stimulate student engagement, and to assist teaching staff with entering results for students on the fly. Nick also speaks of his first experience at WWDC, and joins Meredith Hinze and Cyprien Lomas to pass on some very valuable tips for students and staff heading to the conference in the future.

I was fortunate enough this year to attend X-World, one of the AUC's renowned events. X-World continues to get better each year and this year was no exception. Hats off to Andrew Jeffrey, Thomas Esamie and the UTS team for making the event such a runaway success.

Our regular contributors Mark McMahon and Carrie Clarke round things off. Mark gives us a personal insight into the machinations of China's internet infrastructure (or lack thereof) and Carrie turns her thoughts to the challenges of supporting iPads in the university environment.

As always, I'd like to thank all the contributors for their generosity and time and to our incredible journalist/production crew, without whom this magazine would ever come to fruition. Until our next edition, please sit back, relax and enjoy!

David Yammouni
Editor, *Wheels for the Mind*
publications@auc.edu.au



AUC Update

iPhones in the enterprise



iPhone in the Enterprise Workshop

A workshop being held in Melbourne on September 23 will focus on the integration of iPhones into enterprise environments.

Designed for system administrators, network administrators, computing support staff or management staff, the iPhone in the Enterprise workshop is focused on iOS 4.0 but will also provide insight into competing technologies such as BlackBerry smartphones. Topics include iOS 4.0 features, Mobile Me integration, VPN support, protocol support, remote administration, Exchange integration, profile management, and interactions with Mac OS X Server.

The seminar will run at Cliftons Training Centre in Melbourne, 23 September & will cost \$50 for students and \$100 for staff of AUC member institutions. They are not open to the public.

For more information, visit www.auc.edu.au/iPhone+Enterprise+Workshop

Mobility in Education



If you've been considering the use of the iPad, iPhone and iPod touch within learning environments, you'll find the AUC's Mobility in Education Seminars particularly relevant. To be held in Melbourne (20 and 21 September), Sydney (22 and 23), Brisbane (5 and 6 Oct), Auckland (19 Oct) and Dunedin (21 Oct), the free seminars will cover development on iPhone and iPad platforms, and explore the

impact the iPad has had on the publishing industry and on e-learning. See www.auc.edu.au/Mobility+Seminar for more information.

To be held concurrently with these seminars, a series of iOS 4 introductory workshops will explore the most important parts of the iOS 4 software development kit. Aimed at students in computing science, computer engineering, IT, mathematics and similar disciplines, presenters include the University of Tasmania "Secret Lab" startup and an Apple systems engineer covering iOS 4 and Cocoa. The seminars have filled up quickly, and as of press time spaces were only available for the 18 October session in Auckland. See www.auc.edu.au/iOS+Workshop for more information.

AUC: still tweeting



Twitter has taken over the world of social media over the last year, and we'd like to think we've helped just that little bit. Follow @

appleunicons or visit www.twitter.com/appleunicons to keep up to date with all the latest at the AUC.

CreateWorld is back for 2010; proposals welcome

Following on from a successful event in 2009, the AUC will again be holding the CreateWorld conference this year, from 29 November to 1 December at Griffith University's Brisbane South Bank campus.

This three-day event is designed for academic and higher-education technical staff in the digital arts disciplines, and combines performance, presentation and professional development with a varied and engaging agenda spanning new media, techniques and approaches in practice-led research fields including photography, cyber-arts, music, e-learning, film, animation, and design. This year's themes are less formal and include areas such as ubiquitous computing, innovation and creative expression, user generated content, social networks, Web 2.0, and mobility.

The AUC encourages members with potentially interesting presentation topics to contact satherton@asia.apple.com with a proposal by 1 October. For an overview of 2009's conference, visit <http://betweenthebuttons.net/createworld>, or see www.auc.edu.au/Create+World+2009 for more information.

/Dev/world on its way



There has been a lot in the Apple world for developers to love over the past year, and it's all going to be front and centre at /dev/world, the AUC's annual developer conference, which will be held from September 28-29 at the Rydges Hotel in Melbourne.

Designed for around 120 students and staff of AUC member universities, the event has been a big hit in the past and will feature a broad range of topics on all things Mac OS X and iOS related.

For more information and registration details, see www.auc.edu.au.

Take iPad for a spin

The iPad is here, but there are still many of us that haven't had a chance to take it for a spin. If you're among them, but are eager to explore its potential for use within a university environment, why not sign up for one of the AUC's five iPad kits?

Available for short-term loan to AUC members, each kit includes a 16GB 3G iPad, USB Dock Connector Cable, VGA Adapter cable, iPad Camera Connection Kit, and power adapter. That's everything you need to get iPad-ding, although you'll need to BYO 3G micro-SIM card if you want to access the 3G data network.

The iPad kit complements our existing lineup of loaner equipment, which also includes iPod touch and Mac mini kits. For more information or to find the loan agreement form, drop by www.auc.edu.au/Seeding+Equipment.



Something interesting happening within your university's teaching environment? We want to hear about it! Drop us a line at publications@auc.edu.au and we'll include the most interesting tidbits in the next issue.

AUC debuts @



We mentioned the addition of some new members across the Tasman in our last issue, but we didn't expect a reception like this! Over 50 people converged for the official launch of the AUC at Auckland University of Technology (AUT), which is one of three New Zealand institutions joining the AUC family earlier this year.

Presentations from and to interested stakeholders confirmed that the AUC is already playing a role in unifying the Mac community at AUT, says Dr Stanley Frielick, the university's director of e-learning and teaching.

"There was a lot of interest generated around the whole concept of the AUC," he explains. "I think it's going to galvanise our growing Mac community, which has been quite fragmented in the past with the Apple platform having just a niche in one or two particular schools. They've never really had a chance to connect across the university, and I think the AUC will provide that now."

AUC@AUT, as the team has called the local presence, has already had its first few wins, sending one of its staff members to Apple's World Wide Developers Conference (WWDC) in June thanks to an AUC scholarship. AUT also took advantage of AUC subsidies to send a contingent of six people to the X-World conference in Sydney in July.

Strong feedback from all attendees has vindicated the decision to join the AUC, says Frielick, who expects the formal acceptance of Macs on campus will facilitate a growing investment by staff in developing for Mac OS X and iOS. Two staff have already begun learning iPhone development, and planned future efforts will soon bring students into the mix.

"There have always been one or two techies that had knowledge of Macs, but it hasn't been so coherent in the past," Frielick explains. "It's coherent now because of the AUC. Even our IT services people are realising that Macs are on the campus to stay, and that they need to get up to speed with their support. It's definitely a good move for the IT Services department to be able to do that, and to have senior people on an AUC scholarship is a great way for them to learn about it."





Credit: Tourism NT (travelnt.com)

Mapping the Red Centre

If you have an iPhone and live in a dense population area, you're probably used to the convenient access to online information that ubiquitous mobile coverage provides. But once you get outside the mobile network footprint, connectivity becomes sketchier and assumptions about connectivity are challenged. Interested to see how this change would affect usage models when taken to the extreme, a team at Charles Darwin University (CDU) has built an iPhone application that allows the collection and retrieval of maps, songs, stories, and traditional knowledge from indigenous communities located far, far away from the mobile network.

The idea for the app came as a team of academics began exploring ways to combine multiple forms of media into a single container within the phone, and use those containers to enhance travels through off-the-beaten-path areas.

"We were really questioning what happens when you get out of the service area," explains associate professor Bill Wade, head of CDU's School of Creative Arts and Humanities, who counts amongst his interests the exploration of implications of new technologies on

information models. "You normally go to most of these locations and all you've got is satellite connectivity for positioning data; we were looking at how to develop a cache-based application so you could cache information about your location to your phone before you go out."

Working with a team at the University of Tasmania, the CDU team went bush with a host of iPhones and a group of 20 tourists headed for a Top End nature trip through a recently-developed area near Alice Springs called the Red Centre Way (<http://bit.ly/9Jr2HI>).

The 200km trip along Red Centre Way links Alice Springs and Ayers Rock, passing through a treasure trove of culturally important locations that were annotated along the way. An initial set of data included voice, graphical and textual annotations about particular sites, which are loaded from the device's memory based on its current location as determined by the onboard GPS.

"We have all of this fantastic technology and it's exciting in urban centres, but you normally have to be Internet connected to get this information," Wade explains. "In this case, we're looking at what it really means to be 50km to 60km out of

the mobile service range. It's a matter of being able to download all of the data loaded onto your iPhone; when you go out to the site, it's still triggered as if you're connected live."

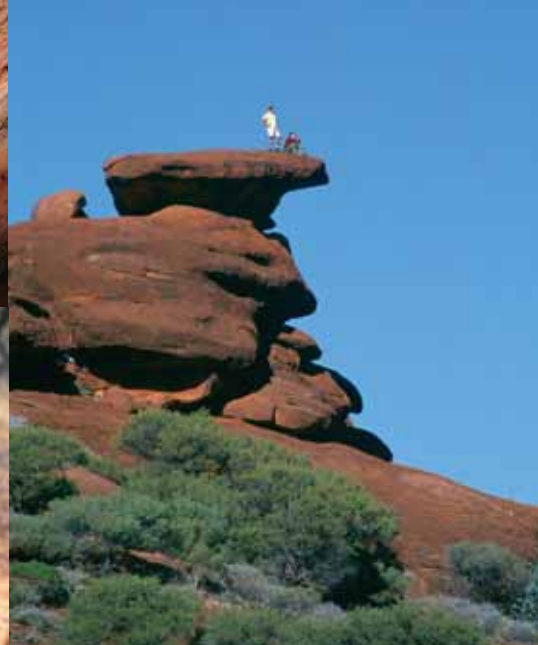
For example, researchers might record a podcast on location while interviewing a tribal Aboriginal elder or recording their impressions of a new place they've visited – and then have that podcast stored and linked with the specific location where it was created. Photos, videos, audio commentary and textual or other notations can be uploaded once the phones are brought back within a service range or synced to a central database, then distributed to other phones running the app on an as-needed basis.

Over time, Wade believes the technique will allow the creation of a large database of region-specific narrations. Travellers headed into a particular area will be able to buy locally relevant media pertaining to that area while they're still in an area of mobile coverage, then bring it with them for reference while they travel. Because data is tied to its location using GPS and the iPhone's GPS doesn't require a mobile connection to work, relevant narrations can be easily pulled up for consumption.



The Red Centre Way links Alice Springs with Ayers Rock

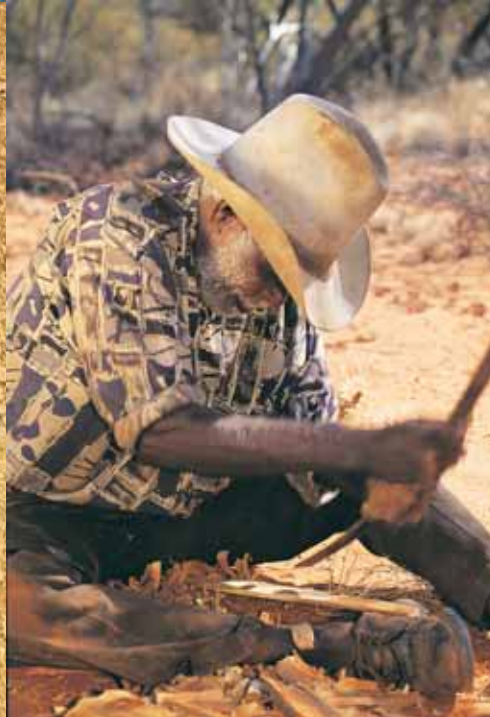
Way

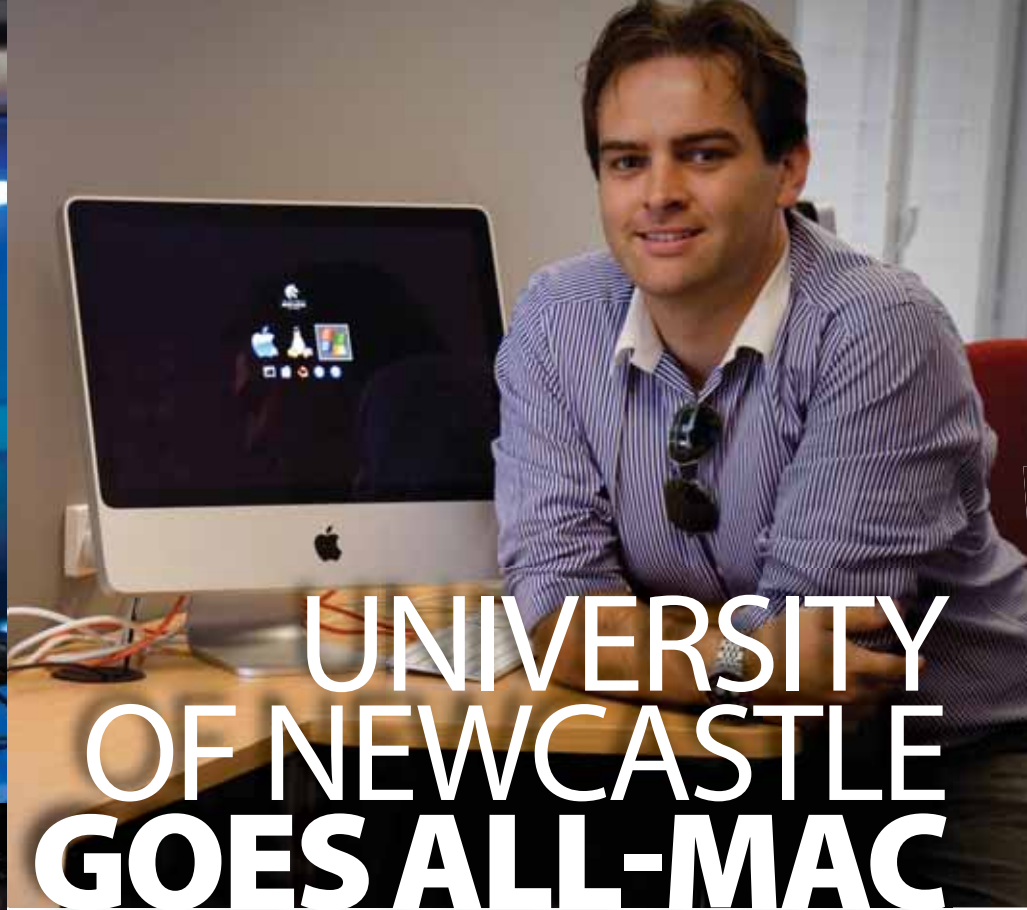


The project fell under the auspices and was funded by the Emerging Technology Funds arm of the Commonwealth government's Australian Flexible Learning Framework (www.flexiblelearning.net.au), an effort to sponsor the use of e-learning within the vocational education and training sector. And while the group is still working out issues relating to intellectual property around the stored media, Wade is confident the app could become a valuable tourism tool and cultural archive at the same time.

There are possibilities for turning it into an augmented-reality form of application, he says, in which relevant media would be displayed when the phone was pointed at a particular landmark.

Other possible enhancements in the future include the addition of social-networking features that allow the addition of comments, blogs, and more. "What we want to do is have a Web-based dynamic database as the backbone," Wade explains. "There may be an online resource that parallels the app, and people will be able to review comments when preparing for a trip. There is a lot more work to be done."





UNIVERSITY OF NEWCASTLE GOES ALL-MAC

Some of them have been using Macs for years, but over 4500 staff and students at University of Newcastle's Faculty of Science and IT recently took the plunge and dove head-first into the world of Apple as the faculty went completely Mac. Over the past year, triple-boot systems have replaced a conglomeration of Windows and Linux-based PCs that had previously been interspersed with Macs across 11 computer labs containing over 300 computers in total.

The change to Macs came gradually, as the faculty moved away from a computer-dependent working model to one in which students carried around their own virtual machines (VMs) on portable hard drives. This allowed them to ease their dependence on specific computers, which had been set up as to dual-boot between Mac OS X and Windows for some time.

Adding Linux to the mix, however, allowed the department to get rid of PCs for good and standardise on iMacs across all of the computer labs. Students can add and remove VMs to their heart's content, then play them on any Mac, all of which are set up using Parallels as a host for the VMs. The Linux and Windows configurations are managed separately and restored from a standard operating environment (SOE) every night to ensure trouble-free operation.

"We had a few issues where people weren't satisfied with what the dual-booting solution was achieving," explains Daniel Conway, the faculty's technical advisor for science and IT. "We made the decision to introduce triple-booting Macs in all of our labs, and allow students to take the base SOE, without any of our licensed software, and set it up any way they want."



Encouraging the students to take ownership of the virtual environment has engendered a cultural change within the faculty: students are encouraged to manage the entirety of their network configuration, ranging from running their own domains inside private virtual networks, to running servers and clients, managing their own group policies, and so on.

"They can watch how changes in one platform affect the clients on the other end," Conway explains. "It's allowing us to do things that we've never been physically able to do because of security concerns, and the flexibility it's providing is changing the way we're able to pitch our offerings to students."

Because it offers all three major computing platforms on a single machine, the new environment has also allowed the department to promote a broader range of skills than it could in the past. For example, Mac OS X, .NET and open-source databases, Web servers and other applications are all readily accessible to students to use as the urge takes them.

The transition wasn't completely easy, however: many students come to the faculty "absolutely terrified" and having never used Macs, although most quickly warm to the platform and many end up buying Macs as their personal machines based on their experiences in the labs. "By the end of their degrees, they're doing development on the Mac and using the Windows side only for testing," Conway says.



Staff have been equally enthused, with more than half of all staff recently switching to Macs based on their experiments and experiences over the past 18 months.

"We went from being a school that wouldn't go anywhere near Macs, to being an area where now all the IT academics won't use anything but Macs," Conway laughs. "They like the hardware, and now with being able to easily virtualise whatever they want, it's having implications on the way they're teaching. Not only do they understand what they're doing better, but it gives them big opportunities to do things they've never been able to do because of system constraints."

Critical to a smooth transition, says Conway, has been taking a slow-and-easy approach that lets users control the migration rather than having the IT department push it on them. A lot of people around the university have been watching the migration with interest, Conway says, and the best way to win their support has proved to be simply showing them the change in teaching that the new environment has facilitated.

Soulver gets a new number



They've come a long way since they first decided to cobble together a new type of mathematical application as an experiment in programming full applications. But with a complete rewrite of their Soulver application now unleashed on the world and versions spanning Mac, iPhone and iPad, Nik Youdale and Zac Cohan are living the joys of cross-platform development first-hand – and loving it.

Soulver was first written in 2006, when the two were young uni students at Macquarie University and finding their feet in Cocoa programming. It was an instant hit, proving popular with users for its novel, plain-English approach to calculations – but it fell by the wayside as the pair got stuck into their studies and focused on other efforts under their Acqualia Software brand, such as their Picturesque image retouching tool.

Having recently complete uni studies, however, the opportunity came to take a new look at Soulver, and a complete rewrite of the application allowed the pair to implement some of the ideas that had been brewing in their heads for years, and others that had been specifically requested by users. The result – Soulver 2, available for Mac in mid-May and released soon afterwards in an iPad version – packs far more capabilities than ever.

“When we wrote the first Soulver in 2006, we were really learning Cocoa,” Zac explains. “We’ve learned a lot during years of coding, so we decided to start from scratch and rewrite it with a bit more philosophy around how we would do it. We looked at the interface, and went through every aspect of the app and added features. Our goal was to make the whole thing more powerful. We want Soulver to become the centre of peoples’ numerical lives.”

Among the enhancements in Soulver 2 are built-in conversion between units of measurement; instant loading of stock prices just by entering a ticker label; ‘tokens’ that work like spreadsheet cell references by changing earlier answers based on later calculations; syntax colouring and more.

As well as adding features, the duo also learned a lot about multi-platform development: this time around, they built an independent mathematical engine that does the heavy lifting. Separated from the rest of the application logic, this architectural choice proved far easier to move between the three platforms.

“We were able to move the Soulver core to the iPad really easily, without rearchitecting the app,” Nik explains. “We have one code base, make changes to the engine, and it just works across Mac, iPad and iPhone.”

iPad development has proved particularly engaging for the pair: the larger screen means they can design a portable application that’s more in keeping with the design of the desktop application, while Apple user interface idiosyncrasies have forced them to design the iPad version in a particular way to ensure a consistent user interface.

Soulver for iPad has sold well so far, with numerous user comments confirming that many customers find the app well worth its \$ 7.99 price tag even though there are myriad basic calculators available for free. With the positive comes the negative, however, and others note that the iPad app still has a long way to go before it can match the functionality of the desktop version.

Nik and Zac are well aware of this, and – in addition to a number of other projects currently in the pipeline – are already working on enhancements that will further differentiate the iPad app from the more limited functionality that’s possible on the iPhone. “As a developer you have to put a lot more effort into creating an iPad app,” Zac says.

“On the iPhone, they tend to be smaller apps that do just the one thing; on the iPad, you’ve got a bigger screen and people expect many more features. But the ratio of complaints to praise is still pretty good, and people are willing to pay for great apps.”

Zac and Nik have generously made Soulver free to students and staff of AUC member universities through the end of 2010. Check out the app at www.acqualia.com/solver or visit www.acqualia.com/store/solver?coupon=AUC%20member to download your free copy.



Apple Update

All the latest from Cupertino



It has been a busy year for Apple, with the iPad making its Australian bow in May and the iPhone 4 hitting our shores in July. Both items have been massively popular, with the iPad selling over 3 million units in a matter of months and the iPhone 4 becoming the most popular Apple product ever after selling 1.75 million units within days of its launch.

If you haven't yet experienced either of these devices, drop by your local Apple store and see if they're not something that would enable new thinking in your learning or teaching – and don't forget to let us know if you're doing something interesting in these exciting new areas. In the meantime, here's a rundown of all the latest from Apple:

The iPad has landed

Months of waiting hadn't dampened the enthusiasm of the thousands of faithful that queued up at dawn's first light to get their hands on the iPad at its Australian launch in late May. The device flew off the store shelves here as in the US, with 300,000 sold on the first day, over 3 million sold in its first 80 days, and sales still going strong. As a device, of course, the iPad is elegant and stylish, with a 9.7-inch, LED-backlit display and Multi-Touch support that provides comfortable usage on its almost full-sized soft keyboard. The iPad is 13.4mm thick and weighs 680g, and easily syncs photos, videos, games, e-books, PDF files, music and apps to and from both Mac and Windows computers. iPad-specific versions of iWork applications provide a tailor-made productivity suite, while the iBookStore allows purchasing of a range of e-books. The iPad also supports external keyboards out of the box, and other accessories allow the connection of digital cameras and importation of photos from SD cards. The biggest story about the iPad, however, is in the innovative uses that students, staff, business people, and home users are finding for it as they integrate it and its more than 200,000 apps into their daily routine. We at Wheels are keen to hear what you're doing with the iPad at your university; please drop us a line if you have a project you'd like to share. www.apple.com.au/ipad



The Australian iPad launch drew massive crowds and quickly depleted stock of the popular device.

MacBook trackpad hits desktop

It's the biggest change in desktop input devices since the mouse, and it's already been getting a good reception from those who have tried it out. Borrowing from the multi-touch pedigree of Apple's MacBooks, the \$99 Magic Trackpad provides full multitouch gesture support, inertial scrolling, pinch-to-zoom, fingertip image rotation, and more. The Trackpad can be configured to support single or two-button commands, and supports tap-to-click as well as physical click. www.apple.com.au/magictrackpad



A new iPhone 4 all

Hot on the heels of the iPad's launch came the much-awaited iPhone 4, which drew the crowds back to Apple Stores and other retailers as sales of 1.7 million units made it Apple's fastest-selling product ever.



The iPhone 4 is bursting with enhancements, including FaceTime videoconferencing through the forward-facing camera; a 5-megapixel camera with LED flash; HD video recording; the same A4 processor as in the iPad; a three-axis gyro for better detection of movement; and the Retina display, which squeezes 960x640 pixels into a 3.5-inch screen to give jaw-dropping sharpness and colour in a 326ppi screen.

Paired with the new iOS 4.0 operating system, the iPhone 4 supports over 200,000 applications through the App Store and a range of features including multitasking, icon folders, enhanced Mail, better enterprise support, and the new iAd advertising platform. Better customisation and content support throughout position it as a full-featured media, book and other media device as well as providing the full range of phone functions. www.apple.com.au/iphone

A bigger display

For notebook users or those wanting a massive second display, you can't look past Apple's new 27-inch LED Cinema Display. Featuring a 27-inch LED backlit screen with built-in iSight video camera, powered three-port USB 2.0 hub, and MagSafe charging connector, the display offers a true 16:9 aspect ratio and in-plane switching (IPS) technology to deliver a 178-degree viewing angle.

Designed to Energy Star 5.0 requirements and with environmental credentials, the 27-inch LED Cinema Display will ship in September at a price still to be determined.



iMacs get a refresh

The popular iMac line of desktops got a refresh in late July, with the reshuffling of the Macs to now span a range of configurations based on Intel Core i3, i5 and i7 processors at dual-core speeds of up to 3.6GHz and quad-core speeds of up to 2.93GHz. The new processors include an integrated memory controller that accesses the 1333MHz system memory directly, as well as discrete ATI Radeon HD graphics processors.

Tweaks to the updated models include an SDXC-compliant memory card reader and an optional 256GB solid state disk (SSD) offering transfer speeds of up to 215MB/s. Prices start at \$1599 for the 21.5-inch 3.06GHz Core i3 model, to \$2599 for the quad-core 27-inch 2.8GHz Core i5 model. www.apple.com.au/imac



Mac Pro gets even more so

Apple's top-of-the-range Mac Pro got a major speed boost in July with a jump to support up to 12 CPU cores via combinations of four-core and six-core Intel Xeon processors running at up to 3.33GHz. The processors' design allows each core to share up to 12MB of L3 cache, while boosting performance with Turbo Boost for instantaneous 3.6GHz jumps and hyper-threading that provides up to 24 cores.

The new Mac Pro also offers the option of up to four 512GB solid-state disk (SSD) drives and includes two Mini DisplayPort outputs to allow the connection of two LED Cinema Displays without additional adapters. Pricing starts at \$3499 for the quad-core model, \$4899 for the 8-core model, and \$6999 for the 12-core model. www.apple.com.au/macpro



Still on Safari

The launch of Safari 5 marked a major milestone in the evolution of Apple's flagship browser, with support for over a dozen HTML5 technologies and Safari Extensions that allow developers to securely add functionality to the browser using standard technologies like HTML5, CSS3 and JavaScript.

Overall rendering speed is 30 percent faster than in Safari 4 thanks to the Nitro JavaScript engine and tweaks such as DNS prefetching, while the new Safari Reader provides an intuitive interface for reading Web articles with options to enlarge, print, or email the content.

Rapidly emerging as the Web's next-generation multimedia standard, HTML5 support is dramatically improved in Safari 5, with support for capabilities like full-screen playback, closed captions, geolocation, forms validation, Ruby, AJAX History, and more.

To sum up: it's fast, it's flexible, and it's free. Get it from www.apple.com.au/safari and, if you're a developer, drop by <http://developer.apple.com/programs/safari> to learn more about the Safari Developer Program.

Your lounge-room Mac mini

Media-centre hobbyists have been bringing the Mac mini into their lounge rooms for years, and the latest update to the venerable little Mac makes it an even more compelling TV companion with the addition of an HDMI graphics port and significantly faster performance.

The redesigned Mac mini has a tiny aluminium enclosure with integrated power supply, a removable panel for easy memory expansion, and an SD slot to easily transfer photos and videos from digital cameras. Inside, the Mac mini includes the NVIDIA GeForce 320M graphics processor, which offers 48 processing cores and twice the graphics performance of the previous model.

Consuming just 10W of power when idle, the Mac mini is also the world's most energy efficient desktop and starts from \$999.

www.apple.com.au/macmini



Don't forget Apple's education pricing

Apple Australia offers educational pricing for university students on all its iMacs and MacBooks. For example, MacBooks drop by \$50; the Mac Mini, by \$80; iMacs by \$50; MacBook Pro by \$100 and MacBook Air by \$150; and Mac Pro by \$300.

Discounts are available to university and TAFE students, teachers, administrators, and staff members as well as parents of current, accepted or applied university students. There's a limit of one discounted desktop and/or notebook per academic year. See http://store.apple.com/au/browse/home/education_routing for details.

UWA students get some air (& errors)

Many students are still surprised to find out that their high-powered smartphones rely on basic Internet protocols that are decades old. Yet we so take network access for granted that Dr Chris McDonald has been taking a novel approach to teaching mobile application design.



Dr Chris McDonald

He's been kicking them out of the classroom.

Learning outside may not sound revolutionary to many students, but for Computer Science students that spend most of their tertiary years bathed in the cold light of a monitor, it was a startling request. Yet it was essential training for McDonald, a lecturer in the University of Western Australia's Department of Computer Science & Software Engineering who set up an innovative exercise designed to make students think about how they can improve the error handling in their applications.

"We teach our students a lot about planning and design, but don't expose them enough to things that can go wrong," McDonald explains.

"Twenty years ago networks were unreliable and developers had to focus on things like error correction and checking. Over time, networks have become incredibly reliable – but the mobile world exposes them to the old idea that things can go wrong. This is a new idea for many students."

McDonald first walked around the uni campus and took a large quantity of geolocated photographs, then made these available on a server. Over the course of five weeks, the students were tasked with writing an iPod touch application that would query available WiFi networks and make an educated guess about the device's location.

There are around 220 different WiFi base stations on the campus, so students were using signal strength and base stations' unique SSID identifiers to find their way. Once the app had taken signal measurements, it would use a student-constructed algorithm that allows the device to make an educated guess about where they're located – and then pull down one of McDonald's geotagged photos to compare it with the real-life view.

Apart from giving the students a chance to get some Vitamin D, the exercise was a chance to challenge some of the assumptions that can lead to fundamental design mistakes when apps are never tested without assumed pervasive connectivity. Apps designed for use in wired-network environments may be able to sneak by without major problems, but in wireless environments – where lost connectivity is an everyday fact of life – a lost signal can be massively disruptive to data processing and integrity.

"As we walk around the campus, we don't have complete wireless coverage," McDonald explains. "It was the first time many of the students had to deal with software where there were lots of errors

in the normal execution paths of the software. To write good, robust software that doesn't crash in the presence of all these errors, and can robustly and reliably deal with the problem, came as a shock to many of them. You can't make as many assumptions as you might normally do."

Students even discovered some other unique problems, totally by accident. For example, one student found that his app kept crashing when he walked through a certain area, but worked fine elsewhere. Extensive testing amongst the students revealed that a particular WiFi base station had used a full 32-byte SSID and was therefore not delivering the expected code to signal the end of its SSID name. This sort of error might never have turned up in normal testing, but would have caused an app to crash when it was being used out in the field.

"This emphasises something about the nature of programming mobile devices," McDonald says. "It's very hard to debug mobile software. But when you're doing testing on a mobile device in the field, the students recognise that this is the real thing – and not a contrived problem that you've had to invent to expose them to an idea. If it were in a contrived environment, students would complain that we were artificially inventing problems and wasting their time. Having marked the projects, we're seeing that students on average did a better job this way."

Although the project involved the use of mobile devices, the fact that TCP/IP standards are equally relied upon by fixed computers means students can take their lessons in application resilience into every project they work on. And while the exercise was purely theoretical in its classroom instance, McDonald points out that the technique could be easily adapted to provide apps such as interactive campus tours.



iPad gets students' votes

Keeping students' attention can be hard enough, but getting them to actively participate in in-class discussions is a world of challenge unto its own. Dr Nick Falkner has found it's more than possible to address both issues, however, thanks to the introduction of an iPad in the classroom and a small custom app.

The idea that the iPad could be used to enliven discussions came just after the iPad was released and Falkner, a lecturer in the University of Adelaide's School of Computer Science, brought it to class. The big screen on the device, supported by its ability to display an external feed that can be run to an in-classroom projector, made it a natural medium for an app that would allow a lecturer to poll the students with questions asked during lectures.

"We want everybody's opinion to be reflected when we ask a question," Falkner explains, "but there's a real risk of disengagement. In large classes, it's very easy to hide."

Using an app custom-built by university and AUC-affiliated development team *twolivesleft* (www.twolivesleft.com), Falkner was able to increase participation by displaying the poll in real time while measuring feedback from the students.

He would ask a question, then count students' hands and tap the iPad in the process. Because students can see the bars growing in real time, they feel a sense of engagement – and more and more students get involved. "As the bars are going up on the screen, more and more people are putting their hands up," Falkner says. "It sounds simple, but it's a very powerful idea."

The net result has been to get surveys that are much more representative of the entire student body's opinion – and to create a sense of engagement that has been impossible to get using other methods, such as the handing out of devices for students to use to participate in polls individually.

"Most of the time, when we go to assess student responses, we have to hand out devices or assume they're already there. Once you encourage someone to look at a mobile device, it's very easy for them to stay fixed on that device. The problem is that once you start scaling up the lecture size, distributing the devices and getting them back again become significant issues."

iPod culture

That's not to say the department hasn't looked into use of other portable technologies; it has already made a deep commitment to the iPod touch, recently handing out a number of the devices to staff charged with marking students' assignments.

Staff used to do this by manually recording marks on paper as they walked around looking over students' shoulders, then entering those marks into a computerised system when they got back to their desks. This approach involved all the usual issues with manual handling: errors, double-handling, and wasted time and effort.

Using iPod touches running a newly-developed app that was also custom-developed with *twolivesleft*, however, data flows straight into the grading system, where it is checked for anomalies before being authorised for upload and stored for later reporting.

"It now means that, with a small set of iPods, we can completely remove the need to do a manual transfer from paper to marking databases," says Falkner, a registered Apple developer who sees great potential for both the iPad and iPod touch to steadily revolutionise many of the standby processes that have been part and parcel with education for decades.

"It's devices like these that make me realise I've finally entered the 21st century," he laughs. "The Apple model of good hardware plus the App Store, plus a strong developer community, is going to be very powerful into the future. They have covered all the bases."



X world



2010

A TECHNICAL ODYSSEY

By David Yammouni

This year marks the 8th anniversary of X-World. One of the premiere events for the AUC, X-World is a conference for support professionals presented by support professionals. It has consistently received high praise from attendees, and this year's proceedings continued in the same tradition.

Held this year from 7 to 9 July, X-World delivers a combination of workshops and presentations centred around Mac OS X and iOS technologies. Supporting these technologies is the central focus of the majority of the sessions, with topics ranging from server administration and configuration, workstation imaging and deployment and automation to iPhone and iPad application development.

All of these sessions work in concert to provide a breadth and depth of knowledge to the IT technical support community that has no peer in the southern hemisphere. Delegates come from all of our member universities including those in New Zealand, who recently became members of the AUC (and in some cases, were once members many years ago).

It is here where X-World's strength really lies: the incredible opportunity to professionally network amongst like minded peers from such a diverse range of people is second to none.

The general atmosphere at X-World is one of excitement and anticipation. This year's presentations offered a wide variety of topics – some of which were quite popular at past X-Worlds, such as workstation imaging and Mac OS X Server configuration and administration.

What was becoming clear this year was the introduction of mobile technologies, in particular iPad and iPhone development and integration, was proving a resounding success with attendees. This has traditionally been an area reserved for Apple's World Wide Developers Conference (WWDC), but it was refreshing to see this field being focused around technical support professionals.

The first day of X-World consisted of feature presentations with Apple kicking off the conference talking about updates to many of their technologies. This was followed by a fascinating session given by Les Posen, a Clinical Psychologist and president of the iMug Mac User Group in Melbourne, titled "Presentation Magic with Keynote". It was an engaging session, highlighting both good and bad practises in the use of Keynote and other presentation software.

Apple, in conjunction with Key Options and Dimension Data, provided us with updates about Apple certification and training (further information can be found at www.auc.edu.au/Training). We were then given an extremely informative session by Arek Dreyer, an Apple Certified Trainer and Systems Administrator, about secrets in the configuration of Mac OS X Server. The day finished up with a round table discussion, led by Anton Proppe of Swinburne and Daniel Burn from the University of Sydney, focusing on the challenges and successes of setting up an iTunes U presence at their respective institutions.

Thursday (the whole day) and Friday morning delivered the bulk of the hands on workshops, as well as general presentations. All sessions were well attended by delegates and I personally found the Podcast Producer II (by Paul Cowan from the University of Waikato), Apple Remote Desktop 3 (by Apple) and iPhone/iPad Development Basics (by Jayant Varma from James Cook University) all excellent and highly engaging.

Friday afternoon's sessions consisted of a presentation given by Apple about the Apple Consultants Network and the final session was a highly entertaining and engaging session (also given by Apple) about iPhone and iPad Development.

Overall, X-World 2010 again delivered on all fronts and the general feedback from delegates was extremely positive. Thanks to Andrew Jeffrey, Thomas Esamie and the team from UTS, the Events Authority, all the presenters and delegates for making X-World 2010 such a fantastic success and we all look eagerly forward to X-World 2011.

Name: Albert Zejnula

Institution: RMIT

First time to X-World? Yes

Highlights:

Discussions of new Apple technologies; being able to put names to faces; meeting people and learning.

Areas for improvement:

Not enough time! Would like to see longer workshops as there was a lot of information presented and some of it had to be skimmed through.

Would you come back? Yes



Name: Damien Cooper

Institution: Charles Darwin University

First time to X-World? Yes

Highlights: Open environment; gathering of information; helpful people; everyone giving freely of their time and knowledge.

Areas for improvement: None!
Overall a very positive experience; excellent facilities; great organisation; everyone is approachable; great information to bring back to my institution; made great connections.

Would you come back? Yes, definitely!



On the ground at WWDC2010



Credit: Nick Falkner

As it does every year, the AUC sponsored a large number of people from member institutions – 20 staff and 23 students this year – to attend Apple's Worldwide Developers Conference (WWDC) in San Francisco.

A large number of applications for the scholarships were received, and recipients came from all across Australia and New Zealand. Applicants expressed strong interest in learning more about development for Mac OS X and iOS 4 on both iPhones and iPads, and by all accounts came back with creative juices flowing and heads full of ideas for new apps and development techniques.

Three of the attendees were Nick Falkner, of the University of Adelaide's School of Computer Science; Meredith Hinze, from the University of Melbourne's Asia Society Australasia Centre; and Cyprien Lomas from the University of Queensland's Centre for Educational Innovation and Technology (overleaf). They kindly agreed to share their experiences from WWDC, as well as a few tips for those contemplating the trek in 2011.

Nick Falkner

It's 5:15am on a San Francisco Spring morning. The wind whips past, lightly chilling my ears and making me glad that I wore the jacket with WWDC emblazoned on the front and 10 on the back. I'm number I-don't-know-how-many-hundreds-or-thousands back in the queue, and it's nearly five hours to the Keynote.



Nick Falkner

Welcome to WWDC, the Apple World Wide Developers Conference.

It was my first year at WWDC, having been awarded the allocated staff scholarship from my university, and I made sure that I had read all of the first-time guides and spoken to people who had been before. But it's still not quite the same until you get there.

Is it worth going to? Yes, a thousand times: yes. You have access to the people who designed, built and maintained the software and development environments that you use everyday for OS X, iPhone OS (Sorry, iOS) and everything Mac. You get to listen to them speak about the new, the cool and the amazing. If you have a specific question, go and talk to them, grab an e-mail address, go to a lab session and work through your problem with any number of Apple engineers.

Having difficulty working out what your user interface should look like? Reserve some time with the UI team and have them work through it with you, in your app and on the whiteboard.

So what do you need to know before you go to WWDC from Australia?

- 1. Do some actual development before you go.** If you go along with only a vague idea of what's happening, you won't get that much out of the experience. If you're going to WWDC, you should have an iPhone/iPad app or OS X application in development, or in the App Store. If you've never opened Xcode or don't understand why the UI changes in Xcode 4 are so cool, this is probably not your conference.
- 2. Bring your problems with you.** Is there something that's been stopping you from finishing your development? Bring it to WWDC and speak to the right people. But don't just bring one problem; work through as far as you can and bring ALL of your problems! I spoke to one attendee who had been stumped by one problem for several weeks and went to speak to an engineer. The engineer looked at it, fixed it and said "OK, what else?" You are drinking from a firehose: be thirsty.
- 3. Take at least one of your development devices with you.** New developer seeds, GMs and early releases abound at WWDC. Be ready to load up and take the new software for a spin. There was a WWDC App this year that everyone promptly

Meredith Hinze

During her first trip to WWDC, Meredith Hinze wasn't really expecting to find a lot of like-minded females. However, thanks to a proactive American and a bit of social networking, Meredith was able to connect with many of the maybe 150 females attending the conference and make lasting relationships that she continues to maintain.

Hinze, who works as IT and Web manager within the University of Melbourne's Asialink | Asia Society Australasia Centre, had been told about the Facebook group Women@WWDC10 (<http://bit.ly/bROREK>) & <http://GirlsInTech.net>, a site designed as a centre of gravity for tech-minded women around the world. Site participant Alexis Goldstein, working through the Facebook group and Twitter suggested a meetup at WWDC, and Hinze was among those who were more than happy to go along while in the US. The informal group met for lunch several times during WWDC and maintain a contact list via Google Docs.

"You get used to [the imbalance between men and women] working in this field," she explains. It's something I have definitely felt going to X-World in Sydney, but it was just a lot more magnified at WWDC. It was amazing to band together at WWDC, because it was an opportunity to meet not just women from tertiary education, but from many different countries around the world and also from varied industries."

Like most WWDC attendees, a good proportion of the women Hinze met had one or more apps in development. Even though she is not a developer herself, however, Hinze found great value in discussing work in the Mac world with her new contacts. "It was just such an encouraging thing to find that community," she recalls.

Hinze also found great value from WWDC, picking up a lot of useful information on topics such as HTML5 and JavaScript: "I tried to go to as much as I could that was Web-based," she says. She nominates hands-on access to code as one of the highlights of the conference, and brought back all sorts of technical knowledge that is helping her in her everyday work.



(l to r) Iman Yusuf (PhD Student, RMIT University), Lisa Pekez (VU), Meredith Hinze (University of Melbourne), and Melody Wang (Comp Sci Honours graduate and staff, UNSW) were among the Australian women at WWDC 2010.

But for Hinze, the networks she brought back from the event and the highlight of connecting with the women at WWDC are equally valuable. Not only does she encourage women to apply for the AUC scholarships so they can experience WWDC for themselves, but "I don't think we would get to go if it wasn't for the AUC scholarships," she says.

Meet other women of WWDC:
<http://girlsintech.net/2010/07/20/a-whirlwind-tour-of-apples-wwdc/>



Credit: Nick Falkner

loaded onto their iPhones and iPads. Very handy and, no doubt, next year there will be more of the same.

4. Get ready to queue. This is WWDC, and you're going to queue. You'll queue for the Keynote (my tip is to get there before 7:00 if you want to get into the main room), you'll queue for lunch and you'll queue for the popular sessions. This is all very relaxed because there is more than enough to go around. If a session overfills, they'll generally run a repeat. There is more than enough food and drink.

5. Get your mobile Internet sorted. You'll be within WiFi for most of the conference, except when it doesn't work (Steve, I swear I wasn't using MyFi during the keynote). 3G is an excellent fallback but you don't want to pay international roaming fees that typically sit around \$20 per MB; get a local SIM or find a provider who will give you a small amount of cheap international roaming. Get it sorted BEFORE you go.

6. Don't hold back. Make new friends, talk code, geek out, ask questions, attend parties, hold coding parties, share apps and enjoy this incredible opportunity. Go on the bus trips, attend the AUC farewell dinner, if you have business cards take heaps of them. Then, once you're back, follow up with people, find out how those apps are going and keep sharing and developing that knowledge.

Finally, with over 5000 people at the conference, you're going to find just about every interest group represented. I managed to find a group of distance runners who were taking on the San Francisco hills and, on the last day, we caught a taxi out to the northern end of the Golden Gate bridge and ran back along the wharves on a clear and beautiful Spring day. There were also foodies, brew hunters and even salsa dancers. This is a

vibrant, diverse and wonderful community, which brings me to my last point.

7. Work out what you have to do in order to be successful in receiving one of the AUC scholarship places. If successful, the AUC will give you some serious money to go to WWDC and do all of the things that I've already mentioned (running optional). If you code for the Mac, iPhone or iPad, you have to go. There is no 'if', 'but', or 'maybe'. You have to go to WWDC. You have about eight months to strengthen your application. Start today!



Credit: Nick Falkner

Credit: Nick Falkner

AN EDUCATOR'S VIEW OF WWDC 2010

By Cyprien Lomas, Centre for Educational Innovation and Technology, University of Queensland

I am not a programmer. As a learning technology researcher, I spend a lot of time thinking about how technology can make teaching and learning better. Most of the time this means exploring how Blackboard or Blended Learning can be used to help students learn better. But on good days, I get to think about how a field trip or a game can help people learn. And this last month, the fun stuff (and indeed most of the hype) has involved the iPad.

It was with this knowledge that I headed off to WWDC with the AUC contingent. I had the hope that I would find that the barrier to entry for creation had become low enough for non-programmers to grasp. I had seen this in other technology areas: often the toughest part of a technology implementation is changing the culture of the users.

My ultimate dream was to be able to start working on my Compelling Educational Content for the iPhone and iPad using the latest tools and frameworks available. Failing that, my Plan B was to be able to forge closer ties to those technical people able to impose their will on these devices and to learn what they needed from a non technical educator to work together.

The Australian Connection. The AUC contingent was well organised. The connections made on the first day served well for the rest of the week. On Sunday, about 45 Australians made the now legendary pilgrimage to Apple corporate headquarters, the computer history museum and Frye's electronics. The day was a great way to mix history with a bit of buying lots of things at great prices. Amidst all the haggling and comparison shopping, the people on

the bus got to know one another and network. I was happy to find that almost half of the people on the bus were interested in education and were inspired by the potential of the iPhone and iPad in these areas.

Waiting for Steve. Part of the experience for a newbie WWDCer is the decision about how early to get up to line up for Steve. Some of the first timers were talking about getting up at 5am. Others suggested 4am. The more experienced showed up around 9:30 and still had a great time. I found that the quality of the experience isn't related to your spot in the auditorium (I was in the 3rd row ;-)) but who you interact with in the lineup. There is a special appreciation earned when you share stories with Dylan from Fresno, Mike from the valley and Josh from New Jersey while leaning for hours on cold concrete. Each brought their dreams and was coming to WWDC to explore the promise that the best apps had not been imagined yet.

Higher Education Night. The Apple Higher Education event took place on the first evening. Exhausted by the events of the first day I dragged myself to the Westin to a Project Parlour type room full of higher education people including educators, programmers and support staff. Scattered around the room were a dozen stations featuring innovative educational projects and their creators. Creativity and technical prowess were abundant and were usually accompanied by an infectious enthusiasm. The creators were often students exhibiting a term project. In many cases the students had left higher education, started companies and were working on version 2.



Motion, Location, and Games. The technical sessions were where the action was. After the state of the union sessions I bravely sat in on technical sessions on CSS, XCode, Motion, Location, Game Centre and many others. The sessions would start with a description of the feature set, a demonstration and then was followed by the technical steps (the code) to make things happen. In many cases I could follow as far as the demonstration and then I struggled furiously to take verbatim notes on the technical bits with the knowledge that it was ALL new to me. It was a crazy, exhilarating learning curve. In the evenings I consolidated the learning by asking dumb questions, hatching ideas and scheming with colleagues.

Found in San Francisco. What did I find in San Francisco? All too often in my day job someone will bring in a bold new project that they would like to build. Often they will describe a project that will take two to five years to create in the same breath that they tell you about the four-week project. Or worse yet, they will describe something that is already a product.

I had set out to determine if the barrier to entry for creating meaningful content on the iPad and iPhone was low enough for a nontechnical person to pick it up without too much training. My conclusion is that we are not there yet. However, what I did pick up was a good understanding of what is currently possible using the existing technology – and also some feeling for what has not yet been dreamed up. And best of all, I met lots of developers. I heard about dozens of ideas. Over many meals and chance meetups I

was able to learn how to start to describe my projects. I like to think that I was able to start to understand how to understand the needs of developers. While it was only a week and I have a lot to learn, I think the week gave me the tools and confidence to start to think of iPad and iPhone projects.

This is a great time to be an educator (with ideas). It was good to discover that my educators excitement about the iPad was duplicated amongst the developers at WWDC. Many believed that the appearance of the iPad represents bold new opportunities particularly in education. Also exciting is the potential of the motion, location and game centre development tools to allow educational content to get exciting. The proof of this was apparent at the Apple Higher Education evening. But the best part of the whole week was running into dozens of people with diverse ideas but with a great interest in the potential for education.

Being the non-technical educator amidst programmers did not feel like it was limiting. There were moments when I didn't understand a thing but I listened carefully and I asked questions. When I asked stupid questions I rephrased them translating as carefully as I could from "Educator speak" until the question became a reasonable one. At those moments I felt like the most popular person in the room.

To sum up, I think the challenge is out there. The best educational apps have yet to be created. The partnerships to create them are ready to be made.

A letter from China

By Mark McMahon



I'm writing this today from China. This is my second visit and as it continues its assault on the world economy, I'm still marvelling at how it seems intent on wiping out any last vestiges of old Empire.

There is smog, there is traffic, there is a cacophony of sirens horns and construction noise that resolve to a steady thrum, like vuvuzelas at a World Cup match.

This buzz heralds the rapid growth of a country that nevertheless still celebrates a rich history and heritage that seems to coexist comfortably with the new world. Polo-shirted youths weave through the elderly rickshaw drivers, while chatting on their mobiles, seemingly oblivious to the generational juxtaposition. And why should they? This is their world now, and they're riding the wave of opportunity as China opens up. There is so much here that it is easy to ignore some startling absences.

There is no Twitter. There is no YouTube. As I plugged in my laptop into the hotel wall socket in downtown Nanjing and fired up my browser I found myself scratching my head at the blank screen in front of me. There was no 404 or blocked sign, and fortunately no threats of re-education either. But the spinning wheel of emptiness occupying the Safari tab where the page title should have been, filled the room with a potent sense of isolation.

The fact that I cannot go back and review that 'Star Wars Kid' video for the hundredth time and the world is missing out on what I had for breakfast is probably not the crushing blow to democracy that some would argue. The principle remains, though, that the great Firewall of China is

real and for the first time I became tangibly aware of being on the inside and not able to look out.

Google's wars with China are well recorded. In their quest for world search engine domination, they set up business there and now balk at the restrictions placed on them.

Remember, though, that this is a company that has also been stealing data through unsecured WiFi networks as its cars roam the streets. What price freedom if such freedom can be so easily abused?

Maybe government censorship is the better option. At the very least there is an honesty in being slapped across the wrists and told 'that's not good for you' rather than sharing my information with faceless organisations that claim not to be 'evil' but whose very existence is based on control of the market.

As Google have found out, it is not easy doing business in China. Generations of isolation are hard to break through in a culture where business is built on relationships as much as mutual benefit.

That is not to say that my experiences have not been extremely positive. The willingness that I've encountered to build these relationships can be measured out in toasts and banquets and firm handshakes of intent. The fact remains though, that I am not one of them and I never will be.

The language barrier itself is one that is difficult to dismantle when everything is discussed through an interpreter. Some jokes just don't translate.

Rather than impose my cultural imperialism on the place I left China vowing to learn some Mandarin. The taxi driver seemed to understand that I wanted to go to the airport. I just hoped that my flapping gesticulations didn't see me

at the entrance of the 'Happy Welcome Bird Sanctuary' or some other poorly translated aviary.

In June, China Daily reported that the country's Internet users has now hit 420 million which makes Australia's total population of 22 million pale in comparison. It is hardly surprising then that Google wanted a slice of the market. In redirecting its search engine to Hong Kong its Chinese advertising revenue has slumped in comparison to home-grown engine Baidu's rapid growth.

Perhaps just being in the market in the first place is enough of a victory. Chinese smartphone users may be using Baidu, but at least they're doing it on Android phones. Apple is more of an exotic beast here, with only two Apple stores compared to the glut of Lenovo shops. iPads are hard to come by but you can at least own an 'iPED'. The Chinese tiger is waking, but it seemingly wants to come to market on its own terms.

Australia's own battle between growth and censorship is on hold as the two political parties try to buy our souls with election promises. By the time you read this, the debate will probably have reignited, with varied levels of draconianism in policy depending on your choice of competitors.

The fact is that no country can claim to be totally free. The web was supposedly spearheading the great democratisation of information but the reality for most of us is that we still get our information from the same mass media we always have.

As I fly off to Singapore, where spitting is a crime but at least the streets are immaculate, it's hard to make a call on the extent to which technology should liberate or place boundaries on our access to information. Is blocking porn better or worse than blocking Twitter? Answer (@Mark_Mc) in 140 characters or less.

Supporting iPads in education

by **Carrie Clarke**

It has only been out for a couple of months, but the iPad has quickly highlighted a gap underserved by other mobile devices. The iPad's unique set of features positions it in a new class of device that lies somewhere between laptops and smart phones. The small form factor, generous battery life and multi-touch interface will certainly appeal to university staff and students for on-the-go work, study, research and entertainment – in particular, those who do field work, travel frequently or attend a lot of meetings or conferences.

Over the last few years, there has been a significant rise in the use of consumer products at universities. Education is typically one of the first industries to enter the adoption cycle of new Apple products. In many ways, the iPhone has paved way for the iPad – particularly from a technological and cultural point of view. As a result, we can expect to see a lot of iPads appearing on campus.

This momentum will in turn increase the need for good support. It is interesting to see that some companies that were pretty slow and cautious in their support of the iPhone when it first came out, have approved the iPad within just a few weeks. Organisations are getting used to the iOS platform: this will allow them to provide faster support for new devices like the iPad. If your university is already supporting iPhones and doing this well, then it will be in a good position to start supporting iPads too.

The IT department at your university will probably start with a pilot group before they broaden iPad

support to staff and students. The pilot group will test things like university WiFi, email, applications and websites to try identify potential problems. Depending on what they find, they may publish a list of useable applications in order to inform (manage expectations of) staff and students interested in purchasing an iPad.

The simplicity of the iPad brings a couple of bonuses to support teams. Firstly, the intuitive interface and ease of use mean that it requires minimal training. Have you ever seen a young child pick up an iPad or iPhone? They know how to use it instantly.

Secondly, a lot less can go wrong with an iPad than with a computer. A reboot will fix most issues – and for anything really tricky, it is relatively painless to backup and restore the device. There is not much ongoing maintenance involved and it is easy to apply updates. As a result, there could be a shift to start looking at iOS devices more like appliances and less like computers. Depending on what apps are used, there may be a call to support the apps themselves, but support for the iPad itself shouldn't be too demanding.

As with any device connecting to university networks and systems, security is a very important consideration. Like the iPhone, the iPad offers several layers of security. Most of this can be managed through configuration profiles that can be deployed via USB, email message, webpage or over-the-air enrolment and configuration. Security features include

support for strong passwords, code signing, VPN, remote wipe, wipe on passcode failures, auto lock, application restrictions, certificates, email settings, passcode policies, WiFi settings and 256 bit encryption.

Apple provides a comprehensive Enterprise Deployment Guide and other enterprise-related support tips at www.apple.com/support/ipad/enterprise/, to assist system administrators with integrating iOS devices with enterprise systems (deployment and support). This is something else to consider when planning iPad support: as the iPad could be viewed as a new class of device, it may require new policies from IT security departments.

The possibilities for the iPad and similar devices in the future of education are exciting. As more staff and students begin to appreciate the unique set of features that puts the iPad in a new class of devices, new opportunities will be identified to develop apps that make clever use of all that the iPad has to offer. Eventually, this may translate to entirely new ways of doing things and in turn, may inspire new ways of learning and teaching.



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CrossWORD Competition



Across

2. X-World reached this anniversary in 2010 (p15)
6. Type of reality the app could enable (p7)
8. Endpoint of the Red Centre Way (p6)
10. Melbourne Uni IT staffer found friends at WWDC (p17)
11. Peak number of real cores in new Mac Pros (p11)
14. Development team that built Adelaide Uni's app (p13)
15. New Trackpad is this (p10)
16. WWDC is like drinking from one of these (p16)
17. For Lomas, the fun stuff these days involves this (p18)
18. Apple trainer who spoke about Mac OS X secrets (p15)
20. Chamber where iPhone wants to hang out (p22)
21. AUT e-learning director (p5)
23. iOS devices could come to be seen as these (p21)

Down

1. Max number of bytes in an SSID (p12)
3. Makes the virtual drum machine (p2)
4. Games platform Lomas learned about (p19)
5. Mac mini feature that makes it lounge room-ready (p11)
7. Name of Nik & Zac's company (p9)
9. Students carry desktops on hard drives as these (p8)
12. iPad case an instant classic (p2)
13. AUC conference held in late September (p4)
16. McMahon was stuck behind this (p20)
19. Spreadsheet-like feature of Souver 2 (p9)
22. More than this proportion of staff now use Macs (p8)

WIN AN
IPOD
NANO



For your chance to win an iPod nano, complete the above crossword (you'll find the answers throughout the articles) and take the letters from the blue boxes then re-arrange them to form a word or phrase. Send this to: crossword@auc.edu.au
Competition closes at 5pm on Friday, 15th October 2010.

CONGRATULATIONS

Congratulations to Mark Schier of Swinburne University for winning an iPod nano by correctly completing last issue's crossword to reveal the answer:

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An iPod nano is on its way!



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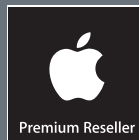
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