

MIND

Wheels for the

10 YEARS OF WHEELS



the new broadcasters



Universities come to iTunes



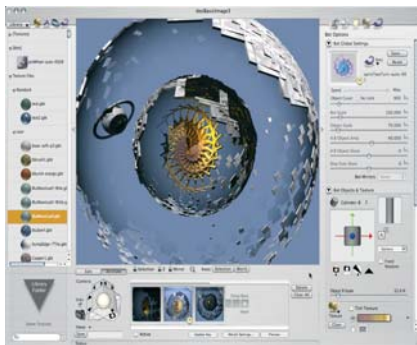
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IPOD
SHUFFLE**

SPECIAL EDITION

PRODUCT ROUND-UP *WHAT'S NEW IN THE WORLD...*



Domo Arigato, Mr GroBoto

In the mood for 3D? Can't be bothered with doing it the hard way? Braid Arts Labs' GroBoto may be just your bag of tricks. It's not a full, conventional 3D modelling studio but instead offers a broad range of free-form 3D tools to bring out your creative side with interesting, animated, well... things! Download a demo or buy the full version (US\$79) from www.groboto.com.



Faster, cheaper Blu

Now that Blu-ray is the undisputed king of high-definition video, it's THE way to distribute HD creations. LaCie's 4x d2 offers 18MB/sec burn speeds and stores up to 4 hours of HD video per BD-ROM disk. Your \$799 also gets you dual FireWire/USB2 connectivity and the ability to burn CDs and DVDs. Contact LaCie at www.lacie.com.au.



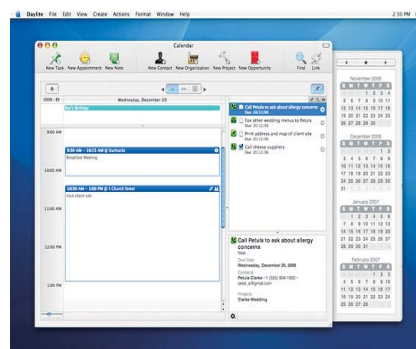
Sssssshhhhhhh!

The problem with lending things out is that you often never get them back, or forget you lent them in the first place. If you're a student, this is annoying. If you run a departmental media library, this can be a real problem indeed. Enter Koingo Software's Librarian Pro, a one-stop database manager for cataloguing books, magazines, games, CDs, software titles, movies, and back issues of Wheels so they never go missing again. Visit www.koingosw.com to download a 15-day demo or buy it for US\$29.95 or US\$99 including a handheld barcode scanner.



Get your Mac back

Losing your Macbook, or having one stolen, has been shown to cause agonising stress, pervading your every pore, causing endless sleepless nights and curious hair loss. If this all sounds too horrible, consider Verey I for Mac. If the thieving scum that took your computer can't enter your password right, it will use the iSight camera to record video of him and email it, along with his IP address, WLAN, and other choice details, to you. Also works with Twitter. Buy it for US\$39.90 from www.bak2u.com/verey.php.



Organise you and yours

Microsoft's Entourage 2008 for Mac may have been loaded on your system next to Word and Excel, but that doesn't mean you have to like it. If Entourage is cramping your style, consider marketcircle's Daylite. Shared calendars, tight email integration, contact management, task and project delegation, and workflow capabilities make this a viable alternative. At \$239 it's not cheap, but glowing reviews suggest it's money well spent; download a 30-day trial from www.marketcircle.com/daylite/ to decide.



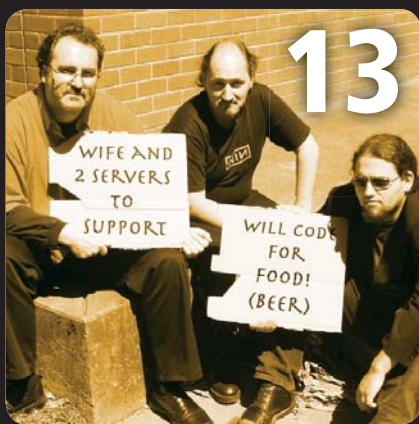
The 4-track iPod

If you're into music – making it, that is, not just playing it – Belkin TuneStudio may be just your thing. It's a four-track mixer with lots of knobs to control level, pan, low/mid/high EQ, and volume. Quarter-inch inputs let you record straight from your guitar, microphone or miked-up accordion, onto your 5G iPod, 2G/3G iPod nano or iPod classic – or via USB straight into GarageBand, albeit on just two channels. Local rrp is \$399.95; check it out at www.belkin.com.au.

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EDITORIAL



Welcome to this special tenth anniversary edition of *Wheels for the Mind*. Over the past decade, technology has transformed learning and teaching in schools and universities, with Apple technology being the vanguard for innovation,

shaping the education landscape in ways we couldn't have imagined ten years ago. The recent release of the iPhone in Australia already has shown signs of having a transformative impact on higher education.

In this edition, we take a retrospective look at the evolution of Apple in education and track the AUC's partnership and commitment to serving Australian universities. The growth in the AUC's programmes and activities over the past decade has been expansive. This is due to the extraordinary energy and enthusiasm of those volunteers who serve on the Executive and have been agents for change in higher education in ways which are concrete and measurable, whose activities are predicated on the principle of 'shared, tangible benefits for all universities'.

When *Wheels for the Mind* was first published in '98, the Executive team and elected members were: Stephen Young, Berrick Krahen, Peter Regattieri, Peder Kristensen, Peter Sharpe, Rod Kevill, Neville Smythe and Glenda Wardlaw. Today, the team comprises Denis Antonellie, Stephen Young, Daniel Saffioti, Tony Gray, Peter Varitimidis, Mark Noonan, Andrew Jeffrey and myself.

The conduit into your university is through your local AUC and AUCDF co-ordinators, and as is often the case in the highly-frenetic work environments in which we find ourselves, we tend to not express thanks often enough for the unseen work done on campus. On behalf of the Executive, I extend thanks to all AUC and AUCDF representatives, past and present, for their most valuable contribution to every aspect of the AUC's programmes.

I would also like to especially thank journalist, David Braue and Publishing Agent, Mike Walsh for their extraordinary professionalism, skills, energy, tenacity and patience! – in keeping the production cycle (the 'Wheels' if you pardon my pun!) rolling along year after year. It is truly a privilege and an honour for me to be part of this small dynamic team, and I know the previous editor, Peter Sharpe, would share the same sentiments.

But it's not just technology or improvements to education that have changed since we first started publication. Generation X has given way to Generation Y and the task for higher education is to meet the education needs of current and future students – because one thing is sure, Generation Z is going to be just as different, and the task just as challenging as the previous two manifestations.

Stephen Johnston



AUC Update

Building for the iPhone and iPod touch

Now that the iPhone 3G has hit Australia, you're going to be wondering how to make the best use of it.

To help developers familiarise themselves with the platform, and to showcase the unique capabilities that make mobile applications better than ever, the AUC is subsidising 20 places at iPhone/iPod Touch Web Apps Workshops in Melbourne and Sydney.

Targeted at student and staff developers studying in computer science, computer engineering, information technology, mathematics, creative arts/design and related disciplines, the seminars will be held at Clifton Training Centre in Sydney on 24-25 July, and at Clifton Training Centre in Melbourne on 31 July and 1 August.

It is expected that those who attend will have some basic experience using Web technologies such as HTML, CSS, and JavaScript.

For more information and to register for the seminars, visit www.auc.edu.au/iPhone+Web+Apps+Workshop

SAGE advice for systems admins

Technical administrators interested in emerging systems management-related technologies will find lots to love about SAGE-AU 2008, a regular conference to be held August 11-15 at the Holiday Inn in Adelaide, South Australia.

In recognition of the event's importance, the AUC will subsidise eight scholarships to the SAGE-AU conference, to be awarded on a competitive nationwide basis to technical staff who manage or administer computer installations in a support, lab manager or network/system administration role.

The scholarship covers half the price of return economy airfare to Adelaide; accommodation for five nights, at up to \$150 per night; and conference and up to 4 units' tutorial registration fees.

Those interested should visit www.auc.edu.au/SAGE-AU+Scholarships and click the link at the bottom of the page to apply. Applications close 21 July.

Innovation seeding grants awarded

After sorting through a strong influx of applications, the AUC has awarded six Innovation (Seeding) Grants for 2008.

Recipients for 2008, and their projects, include:

Kyle Buttress, Griffith University

Live Web log analysis with real time visual representation

Alistair Campbell, Edith Cowan University

Digital task assessment

Volker Kuchelmeister, UNSW

Immersive interactive projection environments using Quartz Composer and OpenGL

Dale Lawson, University of Queensland

itouch lab management

Jonathon Manning, University of Tasmania

Industrial strength visual programming for the OS X desktop

Sam Thorogood, University of Sydney

Who am I: files and their identities

Congratulations to all recipients. We look forward to hearing about your progress throughout the course of the grants.

More Honours scholarships on offer

Applications for a second round of AUC Honours Scholarships will close on July 24.

These scholarships, which have a base value of \$4000 and include up to \$1000 additional funding for publication, conference attendance and excellent performance, support a full-year Honours research project that depends on or uses uniquely Apple technologies.

Applications are welcome from students in a broad range of disciplines, including science, IT, humanities, engineering, arts, health, and business. To apply, visit www.auc.edu.au/Honours+Scholarships

Welcoming QUT to the AUC

After years as an associate member of the Apple University Consortium via the University of Queensland, Brisbane's Queensland University of Technology (QUT) has joined as a full member. This welcome move presages a heightened presence for Macs on the QUT campus, and gives QUT students and staff access to all the benefits of AUC membership.

Welcome to everyone at QUT; we look forward to seeing you at the many AUC events and activities throughout the year!



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

The science of SCIENCE

We all remember using presentations, dioramas, posters and other methods to convey learning during the course of school – but which methods contribute most effectively to childhood learning, and why?

This is the central question in a research project currently being undertaken by Karla Cook, a third-year Honours student at the University of Southern Queensland whose work is being supported by an AUC Honours Scholarship.

By working with two classes in a local primary school, Cook – who is juggling the demands of her Bachelor of Education (Early Childhood) with those of looking after her three children and a 90-minute commute to USQ in Toowoomba from her hometown of Yarraman – hopes to gain a better understanding of how student generated representations help students best learn science concepts, and why.

The project will involve using Studiocode Business Group's Studiocode video analysis tool to record students during the course of their normal learning and presenting activities. Cook, who is working with two local classes of year 4-5 and 6-7 students, will record the presentations and then review them along with the individual children. By asking them to explain particular concepts in the learning activity, or asking them about the effectiveness of various representations in their learning, Cook hopes to build a better understanding of how utilisation of student generated representations in teaching science is more effective – from the student's perspective.

"Education is looking more for representations, and representations of benefits in children's

learning," she explains. "We're looking at multimedia, charts and posters, and even dioramas and clay models. In a classroom with 16 to 25 children, they are going to be learning in different ways and going to need different ways of representing the same concepts."

"Studiocode allows you to categorise specific sections of recordings as they occur, or afterwards. This makes collection and categorising the footage much easier, and it will allow me to collect data and ask questions when it is shown back to the students. They'll be responding to questions that we've formulated based on those representations."

Cook, whose long-running love of science directed her learning during the formulation of her Honours project, has been working under the supervision of Professor Bruce Waldrip of USQ's Faculty of Education, whose own work using Studiocode in collaboration with Deakin and La Trobe Universities was documented in the previous issue of *Wheels*.

"There's a lot more ownership from the kids in what they're doing when multi-modal teaching methods are used and explored," Waldrip said. "With Studiocode, students have to generate their own representations [of learning concepts] and figure out how it helps them. Teachers are saying it has changed the way they teach, because their understanding is so much greater. Teachers can start where the kids are – and not assume where the kids are."

Cook is rapt to have claimed the honour of being USQ's first AUC scholarship recipient, and

is enthusiastic about both the opportunities it brings, and the exposure it provides to the expertise in the AUC community. The project is currently set up and will run through the end of the year, but it could be extended into next year to next year, she adds.

Cook believes the knowledge she will gain from the project will support Waldrip's longer-term studies into multi-modal learning, as well as expanding her potential career options in the long term. "I initially wanted to do early childhood teaching," she explains. "But this has opened up a whole new area for me."



Karla Cook

Now, the whole world can go to Uni

By David Braue

A year after the iTunes U content distribution service was first launched, the June local launch of iTunes U has seen seven universities in Australia and New Zealand become the first institutions outside of North America to offer their educational content to the world through the increasingly popular channel.

iTunes U was created to extend the runaway success of the iTunes Music Store (iTMS) – which has become the world's most popular source of online music, with more than 5 billion songs sold and millions more purchased every day – into the tertiary education space.

The service includes purpose-built portals through which member universities can publish video files, PDF documents, podcasts, and more that are made available to the general public through the iTunes U area of iTMS. All content is available free, and can be downloaded into iTunes and made available for viewing on an iPod, iPhone, computer screen, or Apple TV.

Easy accessibility, and availability to the hundreds of millions of iTunes users around the world, make the iTunes U an ideal way to spread academic expertise, on-campus speakers, information about student life, and other aspects of the university experience to a larger audience than ever.

"The advantages are increasing accessibility for a whole range of people to our materials, whether we're talking about current students or future students, or the community in general," says Professor Sue Spence, pro vice chancellor (learning and student outcomes) with Griffith University, who recently wrote to all of the university's students and staff to encourage them to consider ways iTunes U might fit into their curricula. "It really does create some international presence, and not just a local one."

iTunes U is currently represented in the region by AUC members; Australian National University, Griffith University, Swinburne University of Technology, the University of Melbourne, University of NSW, University of Western Australia and New Zealand's University of Otago. Overseas iTunes U participants include Stanford University, MIT, the University of Arizona, the University of Michigan, the New York Public Library, Museum of Modern Art (MoMA), public broadcaster WGBH, and dozens others.

Even a quick visit to the iTunes U site (accessible from within the iTunes Store) shows the eclectic mix of content available. A video lecture from author, advocate and attorney Harriet McBryde Johnson discussed Nazi Germany's medical research in conjunction with an exhibition at the United States Holocaust Museum. A 2002 video lecture series features Professor Walter Lewin demonstrating a range of physics concepts across 36 fifty-minute videos. Al Gore's May 18 keynote address at Carnegie Mellon University's commencement ceremonies is online. And, in a well-known presentation that is coincidentally

to skipping courses, the opposite has been true, says Mike Harte, Otago's director of Information Technology Services.

"The classrooms were still full," he says. "People were downloading and using them to study from. iTunes U is a natural progression for us, because it's a great opportunity to have a shopfront window into the wonderful high-quality video and audio material that we can make available."

iTunes U is also being seen as a crucial tool in expanding the general public's knowledge, and appreciation of the contribution that the



applicable to the very mission of iTunes U, New York Times correspondent Thomas Friedman discusses his perspective on globalisation as explained in his book *The World Is Flat*.

Downloadable lecture recordings have already changed the way lecture content is being delivered at many regional universities. With automated lecture recording systems such as Lectopia installed at a growing number of institutions, many universities now have a large database of audio and video lectures that can be easily repurposed for iTunes U or other uses.

Recordings of lectures given last year to one overcrowded Health Sciences course at the University of Otago, for example, were downloaded more than 140,000 times from an internal university Web site after so many students crammed into the lectures that even the overflow room was packed to capacity. And while some observers might worry that the downloadability of lectures predisposes students

world's universities make to public discourse. Unprecedented access to some of the world's top academics provides an easy way to break down psychological barriers between the larger public and an academic world seen by many as a bastion of ivory-tower elitism.

"Universities are about making a difference," says Professor Sue Elliott, pro vice chancellor (teaching, learning and equity) with Melbourne University. "This enables all sorts of people to hear lectures they wouldn't otherwise have any chance of listening to. This access is really exciting and does pull down the barriers that are perceived to be there. We're talking about a public library that is being updated on a day to day basis. The knowledge transfer is fantastic."

For more information on iTunes U, visit www.apple.com.au/education/itunesu/. To access it, click on the iTunes Store option in iTunes, then select iTunes U from the iTunes STORE menu.

Melbourne University



I am: Professor Sue Elliott, pro vice chancellor (teaching, learning and equity)

I love iTunes U because: "It's an additional way of delivering material in a way that is a lot more flexible [than distributing it ourselves internally]. Having a public iTunes U site enables people to hear lectures who otherwise wouldn't have had any chance of listening to them. It ties in with our Growing Esteem strategy, which is built on three platforms – teaching and learning, research, and knowledge transfer."

Lecturers love it because: "Some lecturers are doing particularly clever things. To make sure that the quality of the presentation available online is as good as possible, they record the lecture in perfect pieces before hand, and use the actual lecture time in a more creative way – adding more interactivity, which doesn't convey as well when it's listened to later on."

Students love it because: "We have a lot of students being able to replay lectures and review key points again, or to listen to content they were unable to attend for whatever reason. And, for example, we've digitised all the music that music theory students will need, and it will now be available on their portable device. Given the amount of time some of these students spend on public transport coming in to uni and other times, they can use it to spend on learning materials."

iTunes U content includes:

- Cancer vaccine development
- The city as Encyclopedia: Lessons from Melbourne's urban past
- PhD colloquia: The art of the lecture



University of Otago



I am: Mike Harte, director of Information Technology Services

I love iTunes U because: "We've started recording other lectures, and there's an awfully good opportunity for high-quality academic and marketing content to be showcased on the public iTunes U site. iTunes U is a natural progression for us, because it's a great opportunity to have a shopfront window into the wonderful high-quality video and audio material that we can make available. In the first four days of operation, we had 3612 downloads and 11,000 individual people browsing the iTunes U site."

Lecturers love it because: "We're trialling some inhouse developed technology that lets lecturers in seven lecture theatres push a button and record their lectures. We'll be hosting those internally on our learning management system, but we're planning to [add them to iTunes U]. The vice chancellor is absolutely rapt about this innovation."

Students love it because: "Most young people today are using iTunes for organising, searching, and downloading their music. So they're certainly familiar with the interface. It's an easy tool to use and is pretty ubiquitous amongst the students."

iTunes U content includes:

- The God Boy – An Opera (Opera Otago Production)
- Burping Bovidae (Wild Flicks, student-made films from Centre for Science Communication)
- Life at Otago



Griffith University



I am: Professor Sue Spence, pro vice chancellor (learning and student outcomes)

I love iTunes U because: "It serves a whole range of purposes. We already have a whole lot of downloadable audio/visual materials: we're hosting material relating to research, teaching, community engagement, material from the Conservatorium, and so on. iTunes U makes access to our material easier for people. It's like an online library that brings everything together, and I've got all kinds of ideas of things we can do to build on this. It really does create an international presence and not just a local one."

Lecturers love it because: "We're installing classroom capture software and systems, and do video taking of some lectures. It would be quite exciting to be able to make our material available, and we're keen to use it to showcase excellence in teaching and learning. We'll be encouraging as many academic staff as possible to have their own interviews and information about their ongoing research."

Students love it because: "It's an opportunity to showcase the work our staff and students are doing. We'll have concept performances showcasing student work, for example, and we're [canvassing] students about their views and how they would like to see it used."

iTunes U content includes:

- Fundamental human rights and religious apostasy (Justice Michael Kirby)
- Goodnight (student work from Queensland Conservatorium)
- Games Design (course description video)



Swinburne University of Technology



I am: Lisa Germany, educational coordinator, Digital Learning Initiative

I love iTunes U because: "Part of Swinburne's professional learning model is to explore new modes of flexible learning systems. Our lectures are already captured and made internally available, but iTunes U is a good concept for delivering content and expanding beyond the uni. Lectures are just the tip of the iceberg as to how this could be used in teaching and learning; this is the first step into more global distribution of content."

Lecturers love it because: "There's a lot of change going on, and you do want to see your students. My grand philosophy is that they pre-record their lecture, then can turn their lecture time into a much more interactive session. This is enabling lecturers to put much more into their courses because the chalk-and-talk is set as homework, and they can work on developing those themes the students have already been in."

Students love it because: "It's real-world learning. For example, we have a commercial radio course. We had students go out and interview various people around Swinburne, and they're being used in iTunes U to highlight content and let potential students know what the university's different services are. It's a great way to let students showcase what they're capable of."

iTunes U content includes:

- Are mobile phones and powerlines a health risk?
- Our sun: what a star! (SpaceWorks 3D movie trailer)
- Matthew Ricketson on Convergent Journalism (student work)



TEACHING THE NEW MEDIA

Adrian Miles was teaching about video on the Internet long before YouTube even existed. But now that online video is ubiquitous, the RMIT University senior lecturer in cinema and new media is framing the Bachelor of Communications curriculum around the idea of 'network literacy' – the combination of networked collaboration with traditional broadcast media to create something more sophisticated than the simple transposition of established broadcast methods into the online world.

This approach has driven a reworking of the structure of the communications courses Miles teaches – in particular, the fourth-year Honours students who have exclusive access to the university's 'Labsome' multimedia studio, which features a range of audio and video production facilities – including 11 Final Cut Pro suites, four radio production suites and others.

Students who have worked through the Bachelor of Communications (Honours) course are typically fast-tracking themselves for careers in the media, but Miles is determined to instil in them the network literacy philosophy so they can think outside the box of the traditional radio-print-TV triumvirate.

"I'm trying to get them away from thinking of the Web as a place where they can distribute their video and audio," Miles explains. "I want them to think of it as a home for video and audio practice. In the same way that blogs are a completely networked writing practice, this video and audio practice is a practice that you can only do in a networked environment where the idea of a link is fundamental."

Re-education begins in first year, which was recently redesigned to heighten the focus on building network concepts into conventional

curriculum. A previous subject about radio or video production, for example, has been changed to a broader topic about editing; students rely heavily on iMovie to master the editing process in conjunction with courses such as Networked Media, which includes Web coding, online publishing, and video and audio blogging.

"We have broken the courses into compartments," says Miles. "Instead of being technology based, they're competency based. Once upon a time, the ability to distribute your work was the hardest thing because you needed a TV station. But now, if we can distribute work online and start putting links into video and audio, what does that mean about the nature of broadcasting and the stories we can tell?"

Second-year students are introduced to professional modes of practice and integrated media, where subjects like the mandatory Integrated Media require them to blog regularly. Ongoing sharing of and linking between ideas encourages conversational learning as well as writing skills.

"The good blogs are outstanding," Miles says. "Students write notes after lectures, link up and share notes. We have a whole program approach to blogs, and they're used across the courses for reflection, documenting projects, distributing work, documenting meetings, taking notes, and for students to write about whatever takes their fancy. A great deal of collateral learning happens through the blogs."

Third-years focus on understanding the implications when the various forms of communication are blended and begin to feed off each other, while the smaller cohort of fourth-year Honours students move into the Labsome



Adrian Miles

and its professional-level production suites. There, the Honours students under Miles' supervision pursue individual projects that are built into a major thesis or interactive project – and techniques such as blogging are given equal billing with more conventional content production techniques.

The goal of the new curriculum, Miles says, noting proudly that it seems to be achieving that goal, is to produce students whose notions about media are rooted not in the past, but in the future.

"I don't think we can graduate students who work in applied media in the 21st century but don't have some basic network literacy," he explains. "A lot of them think they're going to work in something called TV or radio, which is surprising because they've grown up with the Net."

"They're still surprisingly insistent that those traditional forms of media will survive and that's where they'll be working. But I'm not teaching them for what's happening now; I'm teaching them for what's going to be happening in two, three or five years, because the only experience I know their career is going to have is one of change."

the new broadcasters



When they return after their mid-year break, students in a new postgraduate media course at the University of Western Sydney (UWS) will benefit from a major investment in a Mac-based production facility and mobile broadcasting rig that will change the way they learn.

The facility's genesis came as the School of Communications and the Arts at UWS prepared to introduce the new Master of Convergent Media course, a broadcasting-related unit that eschews a traditional TV broadcasting curriculum to concentrate more on new technologies such as podcasting, online video streaming, and other new online media.

"Originally, designers were talking about putting in traditional TV type things, but the academics pointed out that the world has moved on," explains Paul Savage, technical officer (computing) with UWS. "What the facility

actually ended up being designed to do is to provide proper TV cameras, mixers, and so on – but instead of going out to broadcast, we're putting it [online] through Apple servers."

The facility, located at the university's Werrington South Campus in Penrith, NSW, is built around three Apple Xserve RAID storage servers, providing nearly 6TB of online storage and tape backup capabilities via Apple's Xsan architecture. Around 60 Macs of various pedigree are installed in the building, as are five Mac Pro systems for specific high-powered production tools such as the ProTools audio suite and Final Cut Pro for video production. A dedicated laptop is used to manage the environment.



When it's all put together, the facility gives students in the postgraduate course access to a top-notch range of video capture, production and broadcasting capabilities to support their learning in the new course.

"We made sure the cameras and mixers were the best we could get in the studio," says Savage. "It's all set up just like a real TV studio and build professionally to real-world specifications."

The investment isn't constrained to the Penrith campus, however: a dedicated broadcast van has also been kitted up with three cameras, several recorders, SDI-to-MPEG4 video conversion systems, a generator and more. This vehicle can be driven between UWS' five campuses, and to other sites across the wider community, to allow students to cover events in the field and produce video coverage with extremely short turnaround times.

"We can take the van anywhere on any of our campuses, plug it into the network, and basically within 5-6 seconds can have video straight on a Web site," says Savage. "At the moment, we at the faculty are keeping it for ourselves, but the rest of UWS has heard about the system and they're making enquiries. Right now, it's a lot of practice and learning, but as it develops we expect many innovative applications. We decided to go for as much as we could straight away, and build it and hope they come."



Apple Bytes



It's here, and it's 3G

Eighteen months after it was first announced, the iPhone is finally making its way to Australian shores – and in a 3G version that will let it make the most of Australia's extensive 3G networks.

On July 11, Optus, Telstra and Vodafone began selling the iPhone 3G to customers across the region, giving tech-hungry consumers access to a cutting-edge mobile Internet platform whose possibilities for developers are as exciting as its appeal to consumers.

With more than 6 million units sold, the first-generation iPhone has already been a runaway hit: the iPhone accounted for 19.2% of the US mobile phone market in the first quarter of 2008, according to IDC, making it the country's second-largest smartphone vendor.

IDC's expectations are equally high for Australia, where the firm recently revealed that it expects Apple will sell more than 1.3 million iPhones to Australia alone by 2012. That success will be driven not only by the pent-up demand for the iPhone, but by new features – which include the addition of GPS and longer battery life.

The iPhone 3G also includes iPhone 2.0 software, providing new features such as support for Microsoft Exchange ActiveSync, Cisco IPsec VPNs, MobileMe push email and mobile content management, App Store for easy application installation, and iPhone Software Development Kit (SDK) to support the rapidly growing base of third-party applications for the iPhone.

More than 250,000 people have already registered with Apple and downloaded the iPhone SDK,

which provides easy access to the iPhone 3G's features including multi-touch display, accelerometer, and rich graphics subsystem.

"The software development tools are intuitive and represent a level of polish rarely seen in the mobile area," says Jonathan Backer, manager of mobile engineering with the Walt Disney Company, which was one of the many companies to explore the SDK and found itself up and running on the iPhone within two weeks.

If you're one of the many Australians or New Zealanders who have been eagerly anticipating the iPhone's launch, your wait is over. Drop by www.apple.com/iphone/, or visit <http://developer.apple.com/iphone/program/> to learn more about the iPhone SDK.

Take Me with you

The iPhone 3G may have gotten all the attention on the day, but MobileMe is going to grab your attention every day.

Combining push email, push contacts, and push calendars, MobileMe was specifically designed to smooth the movement of your crucial data between your iPhone, iPod touch, Mac and PC systems. Backed by a suite of Web applications delivering a desktop-like experience, MobileMe provides the same interface to your data no matter how you access it – and it keeps your many devices in sync, all the time.

If you're already a .Mac subscriber, you'll automatically be upgraded to MobileMe, which also includes a Gallery feature for viewing



and sharing photos, and iDisk, for storing and exchanging documents online. By storing all this information in a central 'cloud', you can access it from wherever you happen to be – and selectively make it available to family and friends online.

The MobileMe Individual service costs US\$99 per year and offers 20GB of storage for Individuals. A US\$149 annual family account includes one 20GB account and four 5GB accounts. Additional storage is available at US\$49 for 20GB and US\$99 for 40GB more. Sign up for a 60-day MobileMe trial, or take a guided tour of its features, at www.me.com.

Meet Snow Leopard

The latest version of Mac OS X, 'Leopard', has set the standard for modern operating systems and enjoyed a strong response from developers keen to unleash its power. Its successor, to be called 'Snow Leopard', will continue to advance the state-of-the-art but will focus more on tweaking the environment under the hood.

Previewed for the first time at WWDC in June and due to ship in 2009, Snow Leopard will maintain the basic look and feel of Leopard on the desktop. The new operating system, however, is optimised for use on multi-core processors, supports up to 16TB of RAM, includes out-of-the-box support for Microsoft Exchange 2007 and will feature the all-new QuickTime X media platform, which optimises support for modern audio and video formats to further boost performance.

The 64-bit Snow Leopard will also include the new Open Computing Language (OpenCL), which taps into the high-performance computational capabilities of dedicated graphical processing units (GPUs) that have previously been unavailable for general-purpose computing. OpenCL is based on the C programming language and has been proposed as an open standard.

For more information, visit www.apple.com.au/macosx/snowleopard/.



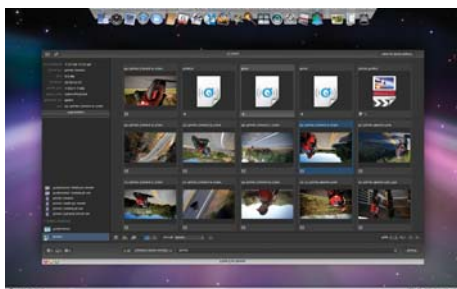
Wealth by 1000 Cuts

You may already be using Final Cut Pro, but how do you keep track of all your digital assets? Final Cut Server (FCS) provides a highly scalable solution for managing large collections of media assets, and for automating the workflow around media management, production and publishing.

FCS automatically catalogues whatever media it finds, generating thumbnails, poster frames and low-resolution clip proxies to speed your browsing. A Windows and Mac client lets anybody search media using anything from simple keywords to complex searches on IPTC, XMP and XML metadata. And, to ensure only the right people can access content for a particular project, access can be restricted based on asset or project-based user permissions.

To smooth workflow in all sorts of environments, FCS includes a configurable event-based response model that tracks job status, monitors media changes, and automates review and approval notifications as well as complex sequences of tasks. FCS is tightly integrated with FCP and includes Apple's industrial-strength Compressor 3 digital encoding and compression tool for cross-format conversion.

Final Cut Server costs \$1299 for one server and 10 concurrent client licenses, or \$2599 for one server and unlimited client licenses. Learn more at www.apple.com.au/finalcutserver.



An even wider Aperture

If you're using Aperture, you already know how much easier it makes the process of managing and retouching your precious images. The latest Aperture update, however, adds a major new feature by providing an open plug-in architecture that supports a range of third-party imaging software, right within the program.

The free 2.1 update demonstrates the power of this architecture with Apple's Dodge & Burn plug-in, which offers brush-based dodge, burn, contrast, saturation, sharpen and blur filters. This selection is being rapidly expanded as Apple works with third-party vendors to fill out the line of available filters. Already released or in the works are:

- Nik Software Viveza: powered by U Point technology, it provides a powerful, precise and easy way for photographers to selectively control and adjust colour and light in their digital images
- PictureCode Noise Ninja: delivers advanced high ISO noise analysis and reduction
- Digital Film Tools Power Stroke: a simple, stroke-based interface to quickly mask and intuitively perform targeted adjustments
- The Tiffen Company Dfx: provides an expansive suite of creative filters and effects
- dvGarage dpMatte: a high performance chroma key tool for creating seamless composites
- dbGarage HDRtoner: enables the selection of multiple photos to create a single high dynamic range (HDR) image
- Image Trends plug-ins: Fisheye-Hemi to corrects fisheye lens distortion, ShineOff automatically removes shine from faces, and PearlyWhites automatically whitens and brightens teeth

For more information on Aperture, visit www.apple.com.au/aperture or visit the community site at www.aperturepluggedin.com.

No delays at this AirPort

The new 802.11n wireless LAN standard promises to boost wireless LAN performance several times, which is why it's already been built into Apple's Mac notebooks, iMac, Apple TV and Time Capsule. The updated AirPort Express now joins the crowd, adding high-speed capabilities to provide the fastest possible access speed for up to 10 wireless users.

Designed for ease of use, the AirPort Express simply plugs into a power point and your broadband connection, and also enables wireless sharing of a printer connected to its USB port. Plug in some speakers, and you can easily and wirelessly stream music to the AirPort Express from any iTunes computer in the house.

The \$129 device supports WPA, WPA2 and 128-bit WEP encryption for maximum WLAN security. For more information, visit www.apple.com.au/airportexpress.



The Art Of Collaborative Art



Collaboration is critical for success in today's multi-modal design environments – but it has traditionally been a hard skill to teach, what with students in different disciplines tending to focus on their own areas of study with little time to look sideways.

Within the School of Creative Arts at Townsville's James Cook University, however, students returning after their midyear break will begin enjoying the benefits of a \$10m 'Megalab' – the most visible sign yet of the school's commitment to promote collaborative learning practices across its courses.

Initially available to students of the nascent Bachelor of New Media Arts (BNMA) course the school launched last year, the Megalab features around 65 current-generation iMacs, five quad-core G5 machines for high-end video editing, and a host of related audio-visual equipment including projectors, surround sound, industry-standard recording facilities, photographic studios, multipurpose presentation spaces, printing rooms, and more.

While JCU has fitted out the Megalab with the latest creative technologies, they are only part of the value offered by the new facility. Collaboration is its pedagogical focus, with three individual rooms separated by moveable walls that let the computer labs be joined together in several configurations.

This design approach encourages collaboration between students and allows for delivery of course material to multiple groups in different ways, and the curriculum of the school's courses is rapidly being updated to take advantage of these possibilities.

"We've broken down the silos and boundaries that were in existence in the past, and which we believe is what's required in the industry," says Professor Ryan Daniel, foundation head of the School of Creative Arts.

"You have to broaden your skills to be a designer, for example, who can also work with digital imaging and cameras. It's all about collaborative work with

people of various disciplines, and we've set that up as a core part of the course. Students find it challenging because they're required to work with peers and provide feedback and assessment."

Collaboration is integral to the curriculum of the BNMA, which requires students to undertake a formal minor in a second area of study as well as expanding their horizons through partnerships with bodies such as community or industry groups.

Next year, a new mandatory third-year subject called Creative Exchange will see students spend a full semester working together on real-world projects in multi-disciplinary teams. The project will include collaboration with students from related disciplines such as IT and business, as well as industry mentoring and other efforts to provide real-world context around the skills students are learning.

In the long term, Daniel says, the program will be further expanded to incorporate collaboration with other universities across Australia and overseas. This scope, he believes, will ultimately help the school produce better rounded students who are ready to dive into real-world collaborative projects that silo-based learning can't address. "We're basically making the training as contemporary and real-world as we can, and providing the latest and greatest in hardware, software, equipment, colour management, and other areas," he explains.

"This education was previously done discretely across all the individual art forms: photography students, for example, had their own labs and would sit in there and hide for three years. This approach totally breaks down all those silos and mixes students up. By third year, students can go to industry players and say 'we've got these multidisciplinary teams working, and we'd like you to become involved'."



With budgets tight and expectations high, (from left) Peter Stagg, Rohan French and Ken Blakey used Mac OS X and PERL scripting to put the screws on over 74,000 HTML files.

Top-down mandates are never much fun for workers charged with fulfilling them, but the order that trickled down to all Monash University faculties several years ago was particularly challenging. Faculties, the mandate said, were to stop publishing online content themselves, instead shifting past and future content to the university's new Interwoven TeamSite content management system (CMS).

This might not sound hard to some, but dealing with more than a decade of haphazard content creation, in which departments of the Faculty of Arts had been individually empowered to create and post whatever content they wished using Adobe Dreamweaver – was daunting from the start for Peter Stagg, Webmaster within the Monash Faculty of Arts. He and two other staff faced the challenge of standardising and converting some 74,000 different files, each with different formatting, design conventions, and naming methods.

"We didn't have much consistency across the Web server," he recalls. "We were looking at 15 years of unfettered development, and we had to complete the migration quickly so we weren't holding people up after freezing their sites during the transition."

Converting the files manually was one option, but it was quickly dismissed after the team learned that a manual conversion effort in another faculty had taken three years to work through just one-fifth as many documents. Instead, the team began looking at ways to use scripting to first clean and standardise each file, then to convert the legacy HTML to an XML-based format that could be fed into TeamSite.

With the general methodology understood, however, the team faced some technical hurdles – initially, in such a seemingly simple issue as dealing with the 'case' of filenames.

Because existing files had used no particular convention for creating filenames, it was not uncommon to have files with inconsistent capitalisation, and some files had different versions with the same filename but different capitalisation. Feeding these names into the PERL scripts the team was developing was a recipe for disaster, because the scripts wouldn't be able to tell the versions apart and couldn't address files with bizarre case conventions.

To avoid creating all sorts of problems when the files were moved onto the case-sensitive Unix systems running TeamSite, the team went looking for an alternative. Linux and Unix, both of which are fully case sensitive, were dismissed "because we didn't want to have to learn those systems just to do this process," Peter explains.

Instead, the team tried Mac OS X and the HFS file system, which preserves case but is not normally case sensitive like Unix is. Initial tests showed not all applications would run correctly when the main hard drive was forced to run as case sensitive, and the scripts would not run without case sensitivity.

The solution was a compromise: the main hard drive was formatted with HFS, and an external drive was formatted with HFS configured for case sensitivity. This allowed the Mac OS X environment to run correctly, while retaining case so the PERL scripts could handle files correctly.

Working through the large volume of files in chunks kept the process to a manageable size, and the team set about the task slowly but steadily, after authoring what became two reasonably complex scripts for massaging the existing content.

The first script handled issues such as cleaning up HTML structures and removing extraneous information added by Microsoft Word; tools such as the open-source HTML Tidy libraries and esoteric Mac OS X functions such as iconv were integrated into the scripts to accomplish this task.

Use of iconv was particularly important in dealing with non English-language character sets, because many documents used old or non-standard encoding of Korean and other languages. Non English-language content turned out to be a major issue just a short way into the conversion process, when the School of Languages, Cultures and Linguistics proffered documents in a whole range of languages that forced a week-long rewrite of part of the conversion tools.

The second script parsed the cleaned HTML to convert tags into an XML 1.0 compliant format: "We had a lot of stuff that might have been compliant back to HTML 3.0, but was no longer compliant today," Peter explains.

All told, the conversion process took the three-person team more than 18 months to complete – a speed record that Peter attributes to the automated scripts whose development had proved too daunting for others before them.

"Some other departments had said they were going to do this programmatically, but they gave up," he says. "Being pretty ground-level programmers, we took it as a challenge – and we reckon we sped up the process by a magnitude of 10 or more compared to doing it by hand. We now have a set of tools and processes we've been selling to other faculties, and have even had other universities enquiring about them."



Academic Ramblings: There's still a lot to learn about learning

By Mark McMahon, Edith Cowan University

The problem with teaching and learning is that everyone is an expert. We've all been to school, and many of us still bear the raw and angry scars of bad teaching. Over time, schooling has evolved, but continuing debates about outcomes-based education, national curricula and so on show that we're still stumbling through a theoretical and ideological quagmire.

Maybe the 'traditional' approach had it right. Behavioural psychology tried to objectify learning, making it more 'scientific'. The science was simple, arguing that you cannot see inside peoples' brains so you should focus on the things you CAN see: the inputs and outputs, like salivating dogs and pigeons pecking targets for food rewards.

Stimulus, response and reinforcement. It works on our pets ('sit!' 'good dog!') and it works on crying children in supermarkets ('shut up or you'll get a smack'). Some of us had similar school experiences, sitting in long rows reciting times tables in unison and getting rapped on the knuckles for every incorrect response.

So what happened? At some point we realised that as effective as these methods are, assuming that everyone learns the same content in the same way is far too limiting. Recent approaches acknowledge that we are not all blank slates, and that our previous learned experiences have a major role in the way we process information.

Cognitive neuroscience can now tell us which parts of our brains light up when we use language, experience music and so on. Rather than being an inscrutable black box, this is a 'glass box' way of looking at learning. The problem is that we still do not understand what we see.

We know now that we have a limited amount of short term working memory, but our long term memory is almost limitless. We can cram information in there, but then how do we remember where we put it? It is as if our brains are large untidy bedrooms with all the useful stuff hidden among the dirty laundry and unboxed CDs.

So we try to make learning meaningful, giving students opportunities to develop their own understandings, practice and rehearse them to form rich conceptual networks or schema.

Unfortunately, that means my conceptual network is different from yours. The skills I learn will be different to you and informed by my own world view. As we move further away from a homogenised approach to teaching and learning, it becomes less prescriptive and less autocratic. Teachers are now facilitators, scaffolding individual learners through their personal journeys of self-discovery.

At its most extreme, this constructivist notion of learning questions the very nature of knowledge. If everything is mediated, either socially or individually, then what is a fact? What is truth? The labels we use to inadequately describe this thing called life are in a constant state of flux. Just how many planets are there now in the solar system?

Such relativism can be useful. Embracing the multiple perspectives inherent in most disciplines

can enrich them and progress them, as well as promoting learners' development of generic skills such as analysis and creativity.

At the same time, we need to be careful not to throw the baby out with the Skinner box. Behaviourist learning has become demonised lately, but it is worth remembering that at its foundation is the belief that everyone is capable of learning through a process of systematic instruction. In treating everyone the same, it is fair, transparent and a direct reaction to the Nazi focus on eugenics that preceded it.

If I were teaching road safety, I would not want my students behind the wheel of a car contemplating the cultural implications of a red light. Sometimes *there is* just a single correct answer. By the same token, I would not teach musical appreciation by getting students to rote learn Beethoven's symphonies.

Universities have to reconcile these perspectives too. Medical students need a primer in pharmacology that involves sitting down and learning their text books. Not very glamorous, but essential if they are not going to kill their patients. They won't learn interpersonal skills from a book though.

Graduates need industry specific knowledge, but a capacity to continue to learn and grow in their chosen fields. The fact that in many cases we take students on the basis of their capacity to empty their brains onto a sheet of paper in an exam, and assess them in the same manner, is where we need to rethink our approach.

Developing teaching strategies that promote both content knowledge and general skill development is one possible compromise, combining formal objective forms of assessment with more iterative personal forms of reflection that map learners' developing understandings.

So where is the research to support all of this? It was Ernest Rutherford who said, 'The only possible interpretation of any research whatever in the "social sciences" is: some do, some don't'. Of course, he was a scientist, and learning is not like nuclear physics. Maybe that is the point.

In the end, learning is about the learners, not the content to be learned; and there are as many ways of learning as there are learners themselves. Let's embrace that and give them as many choices as possible.

Dr Mark McMahon is a senior lecturer in Edith Cowan University's School of Communications and Arts

WHEELS: ROLLING FOR 10 YEARS AND COUNTING



Apple's first iMac was a revolution in a computing sense – with no floppy drive, a clear blue plastic cover, a 233MHz PowerPC G3 processor, 32MB of RAM, and a whopping 4GB hard drive. And, when it was introduced on May 6, 1998, it changed the world of computing in no less a fundamental way than the original Macintosh did.

Since then, Apple has gone from strength to strength – and Wheels for the Mind has, as it happens, been there to follow the success of a company that continues to set the pace for innovation in the IT space.

This issue marks the 10th anniversary of Wheels, the official publication of the Apple University Consortium and an indelible record of the fantastic achievements of Australian university students, staff, and researchers.

Over that time, we've worked hard to keep Wheels as relevant for an academic audience as possible, and expanded coverage with a stronger focus on students and the things that matter to students. We've covered developers, lab technicians, grid computing, and surgical simulations. We've followed multimedia projects from CD-ROM launches to feature films and all manner of pedagogical rumination.

And we're continuing to work hard to share the latest innovative research, development, and just plain interesting stuff happening in the world of Apple-related technologies. Australasian universities are hotbeds of innovation and – as is clear from the recent addition of Queensland University of Technology and the opening of new Mac-based production facilities at two other universities – continue to strengthen their ties to the world of Apple technology.

Here's a look back at the issues that have kept Wheels rolling over the years, and the technologies that Apple has produced to keep us marvelling, enjoying, and creating.

Apple introduces:

1998

Hardware:

'Bubble' iMac in Bondi blue

Software:

Mac OS 8.5

State of the Art:

AppleShare IP 6, QuickTime 3

AUC member universities:

20

AUC events

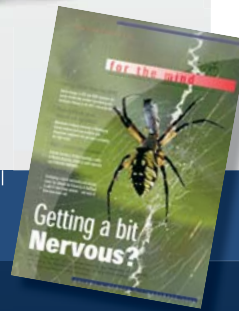
and projects supported:

WWDC scholarships, WebObjects seminars, Apple Technologies troubleshooting course

What Wheels covered:

Multimedia dentist education, 'People of the Rivermouth' CD, Open University online, household water use simulator, medical genetics multimedia

WHEELS: ROLLING FOR 10 YEARS AND COUNTING



1999

Apple introduces:

Hardware:
Coloured iBook,
Powerbook G4

Software:
iMovie, Mac OS 9

State of the Art:

InfoWave PowerPrint, MicroTouch ClearTek iMac touchscreen, Castlewood ORB 2.2GB removable disk, Iomega Zip 250

AUC member universities:

24

AUC events
and projects supported:

WWDC scholarships, AUCF Seeding Grants, Pilot Grants and Major Grants introduced

What Wheels covered:

Heart physiology multimedia, sedimentation simulation, water quality management multimedia, student services moving online, online musical jamming, QuickTime over the Internet, iMac compute cluster, cell physiology simulation, virtual lab equipment, phobia treatment

2000

Hardware:
Power Macintosh Cube

Software:
Final Cut Pro, iMovie 2, AppleWorks 6

LinuxPPC 2000, LaCie 20GB external hard drive, IBM ViaVoice, Plextor 12x10x32 CD-RW burner, CodeWarrior for Mac OS X, Adobe Type Manager 4.6, Fantom 13GB (\$699) to 75GB external drives

38

AUC conference (U of Wollongong), WWDC scholarships, Mac Java programming course, WWDC program expanded to include students

Virtual student art gallery, architecture visualisations, brain scanning, Murdoch's \$500,000 digital production lab, memory and doctored photos, Kanji teaching, UTas' 16 years of AUC success, NetBoot computer lab, Mac lockdowns, AUC expands to India



2001

Hardware:

iBook G3, Powerbook Titanium G4, iPod, iMac patterns, AirPort, Apple Cinema Display

Software:

Mac OS X, iTunes, iDVD, DVD Studio Pro, WebObjects 5

ZiO! Card reader (\$141.90), LaCie PocketDrive 8x4x24 CD-RW (\$1249), Farallon RangeLAN-DS wireless access point (\$2901.80), MacLinkPlus, blank DVD-R discs (5 for \$100), Ricoh MP3 player-2.1MP digital camera (\$1399), Office 10 for Mac OS X

40

WWDC scholarships, AUC conference (James Cook University), Mac OS X technical training and migration, AUC Web site redesign

AUDF projects, iTunes and Internet radio tutorials, Mac OS X adoption, academic writing CD-ROM, Macs at Monash, Swiss Macintosh University Group and AUC, Apple University Executive Forum, Streaming media metering, ECU's Mac facility, U of Q Bachelor of Information Environments program, Macs at Curtin, Dr Mahalingam College of Engineering-ECU exchange

2002

Hardware:

xServe, iMac G4, iBook 14.1", eMac

Software:

Mac OS X 10.2 'Jaguar', iPhoto, iCal, iChat, Apple Remote Desktop, .Mac

Trek 2000 ThumbDrive (128MB for \$499), ActualDepth 3D monitor (\$6900+), Silicon Memory 20GB external hard drive (\$403), EtherWind wireless print server

40

WWDC scholarships, iPod seeding project, Cocoa training, University Macintosh Technical Forum launch

The digital ceiling, Prof Duane Varan award for interactive TV research, iPods (5GB for \$895), iPhoto launch, iMac G4, digital design at WA TAFE, Melbourne Uni Mac TCO, Macs at Murdoch, U of Q language teaching, QUT course catalogue, NetBoot at UNSW, thermal column modelling, Omnium online collaboration, Victoria University Online Training Centre, iMovie in wine making, AUC at University of Wollongong, Asian artist collaborations

2003

Hardware:

iBook G4, iPod 3G, Power Macintosh G5, Powerbook G4 Aluminum, xServe RAID, iSight

Software:

Mac OS X 10.3 'Panther', Safari, iTunes for Windows, iLife, Keynote, Final Cut Express, Shake

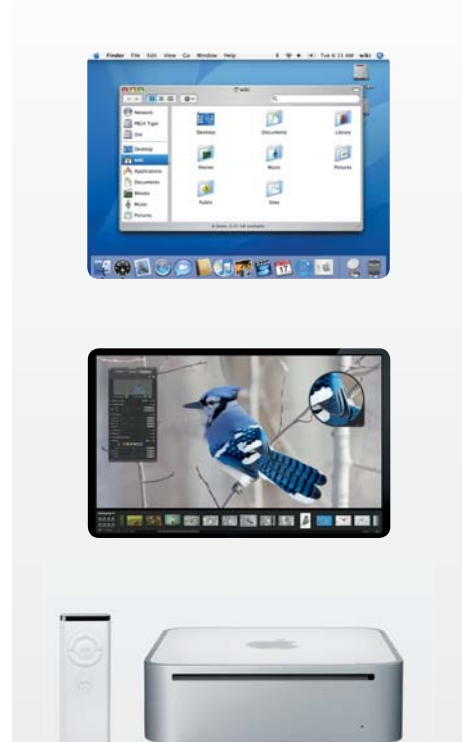
Score Writer 2, WebEx, NetNewsWire (RSS reader), Canon 300D digital SLR, FrogPad one-handed keyboard

40

AUC conference (University of Adelaide), WWDC scholarships, X World

ECU's collaborative content management, plant growth simulator, diagnosis tool for GPs, New Zealand Sign Language CD-ROMs, automatic quiz maker, iChat AV, UNSW sound studio, Macs make music for Griffith, G5 computing cluster, X World

WHEELS: ROLLING FOR 10 YEARS AND COUNTING



2004

2005

Apple introduces:

Hardware:
xServe G5, iMac G5, iPod mini,
20" and 23" Cinema Display, Airport Express

Hardware:
Mac mini, Video iPod, iPod nano,
iPod shuffle, Mighty mouse

Software:
GarageBand, Logic Pro, Logic Express,
Motion, Xsan

Software:
Mac OS X 10.4 'Tiger', iMovie HD, Final Cut
Express HD, iTunes in Australia, Pages, Aperture,
Soundtrack Pro, iWork

State of the Art:

Modul8 video compositing, external dual-
layer DVD burners (\$499), eBeam electronic
whiteboard, webMathematica

Pixlock iStabilize, iBlog, SoundSoap 2, Concepts
Unlimited, Linksys Wireless G Presentation Player,
Xaos Tools Paint Alchemy, Textissimo 3

AUC member universities:

40

40

AUC events
and projects supported:

WWDC scholarships, AUC Best Practice Awards,
X World, Classroom In A Box, SAGE-AU
scholarships

AUC conference (University of Tasmania), WWDC
scholarships, AUC Dashboard Widget Challenge,
Tiger Tech Talk funding, X World, High Definition
Editing Suite, AUC Seeding Equipment program

What Wheels covered:

Marratech virtual meeting room, Preserving
Aboriginal music, Swinburne scientific
visualisation, Robert Stainsby profile, 20 years
of the AUC, Singapore English teaching,
Xserve video streaming

Swinburne's HDTV studio, AUC training feedback,
AUC scholarship profiles, Benn Cizauskas sleeps
out, Macs at Trinity College, X World feedback,
WWDC feedback, podcasting lectures, iLecture
success, digital technologies in the classroom



2006

Hardware:

Intel-based iMac, MacBook, MacBook Pro, Mac Pro, iPod shuffle (clip), iPod Hi-Fi, Wireless Mighty Mouse

Software:

iWeb

Corel Painter Essentials, Adobe After Effects 7, Flip4Mac, DEVONagent meta-search tool, AssistiveWare VisioVoice, SmartSound SonicFire Pro 4, Google SketchUp

40

WWDC scholarships, X World, AUC Cocoa Workshop, REALbasic training, Ruby on Rails training, WebObjects training, Mac OS X technical training, Podcasting & Streaming Internet Media training, CreateWorld

AUC students' Apple internships, Classroom In a Box neuroscience, UTS animation render farm, linguistic analysis, from mice to tablets, Apple's Intel shift, awards for AUC member teachers, ANU's Xsan makeover, UTS Programmers' Society, Queensland Conservatorium podcasts, mobisodes, RAGE game engine, Australasian Computer Science Week

2007

Hardware:

iPhone, Apple TV, 3G iPod nano, iPod touch, aluminium iMac

Software:

Mac OS X 10.5 'Leopard', Safari for Windows, Numbers, Color, Compressor, Final Cut Server

CatDV, Fluid Mask, Blurb BookSmart, DAZ Bryce 6, Virtualbox, LaCie d2 Blu-ray drive (\$1259), free Autodesk Maya, ArtRage 2, Aabel, VMware Fusion, Toonboom Storyboard Pro

40

AUC Conference (Gold Coast), WWDC scholarships, X World, CreateWorld, AUC Honours scholarships, Leopard Tech Talks, SAGE-AU Innovation Grants

iWeb portfolios for life, USQ theatre podcasts, brain research, rough guide to MacWorld 2007, CreateWorld feedback, Microsoft Entourage, award for Deakin's GreenFoot, Apple TV at Griffith, JCU's Bachelor of New Media Arts degree, Rendering Fort Scratchley, ICE content management system, Nigel Kersten goes to Google, OS X Leopard, structurANTion theory, OpenOffice for Mac, Picturesque, Otago's remote lectures, spherical projection, Quartz Composer for video jockeys, 12.1 surround sound, U of Q SAN, Xgrid and cross-entropy optimisation, Honours scholarship recipients, X World feedback, WWDC feedback

2008

Hardware:

iPhone 3G, Macbook air, Time Capsule

Software:

MobileMe Internet Service, Final Cut Server

Bento, Endnote X1, Pixelmator, Office 2008 for Mac

41

WWDC scholarships, X World, CreateWorld, AUC Honours scholarships, AUC Student Developer Scholarships, Mac OS X technical training, AUC Innovation Grants, new technology loan programs

iPod and personalities, Studiocode video analysis, 'My Shout' production, U of Q student assessment, news production for students, scripted course production, mobility tips and tricks, Generation-Y, CreateWorld feedback

Moving with the times

By Carrie Osborne

Right now, we are inside a very colourful picture - there is so much going on around us. We have left behind the frame that contains big chunky mobile phones and slow computers with flickering green screens. Well, most of us have anyway. In the future, we will be able to look back at the devices we are all using at the moment, and appreciate just how important they were in defining the era that we are in. Technology is seeping into just about every aspect of our lives - and as it does, it is breaking old traditions and shaping new ones. The idea that we are slaves to technology and isolating ourselves through its use, is fast being superseded by a strong trend of social interaction and smart use of technology.

When it was first adopted by the public, the Walkman created a stir. People were seen to be excluding themselves by indulging in a "private" act (listening to music) in public. These days, when you are out and about you see people sporting their signature white headphones all over the place, and this is widely accepted. The iPod allows us to really control our time spent in public - jumping between music, movies, podcasts, audiobooks and lectures as we wish.

Although it might not be obvious - this experience can bring with it a lot of social interaction. There is a strong online community surrounding the iPod and iTunes. Users eagerly share reviews, playlists, recommendations, information on artists and more, with each other. In turn, this facilitates self expression - as users are encouraged to develop their individual tastes, and gain access to lesser known artists that they may have not discovered otherwise. In addition, the Nike iPod sports kit allows runners from all over the world to compare stats and goals online. This is great if you can't find a running partner in your area, because it keeps

the competitive and social aspect alive (which is good motivation on dark winter mornings). We have come a long way from the Walkman days, however the personal sphere and public sphere continue to become more scrambled.

Something that used to clearly define whether we were in a personal or public domain - was whether we were contactable or not. This has been completely redefined with the rapid embracement of mobile phones. Now people have become accessible to the point where you can contact them almost anytime and anywhere. As a result, society is becoming more demanding of instant communication. And with the rise of email capable phones (like the iPhone), expectations for prompt replies to emails are increasing too. People are taking calls on the train and firing emails whilst waiting in line for coffee - closing business deals before they even get to work. However, as we all

know, mobile phones are not only popular with suits. Teenagers have eagerly snapped them up, and this (along with other new technologies) has dramatically changed the high school social scene. In the past, if you wanted to talk to a friend after school - you would have to make the call from your landline (normally in a "public" area of the house) and this often meant that you would talk to one of your friend's parents or siblings before you got through to your friend. These days, this extra level of contact has largely been removed by mobile phones, texting, online messaging and social networking.

Ten years ago, photo albums rated highly on the list of things that people would grab first if they had to quickly evacuate their house. Although this may still be the case for many people, it is changing with the growing amount of online photo storage services. Digital photography is



great - you can take hundreds of photos at a time, without having to purchase film or pay for developing and processing. This allows us more freedom to take photos of anything we want, where we would have been more selective if using a film-based camera. Unfortunately this also means that some people now tend to take less time to think about a shot before they take it. This trigger happy approach, along with the ease of sharing digital photos, has contributed to a slight change in the value that we place on photos these days. Children today will inherit large collections of digital photos from their parents - whereas in the past, often only a few special photos were passed down.

The rise of the internet itself means that there is an absolute wealth of information at your fingertips. Something that would have taken hours of research in the past can now be found by Google in under a second. However, the information you find on the internet is not much good without the skills to sort, verify and manipulate. In addition, the rising popularity of video content (eg. YouTube) adds a valuable dimension to research that would have been difficult to access in the past. It seems that this is making us more information hungry - and we are becoming more reliant on instant access to everything as we need it. We can now receive instant notification as things we desire become

available - including places to live, jobs, air flights, concert tickets, old friends, prospective partners, rare collectors items and more. In the past it was very time consuming to do these things - now, you can just set up an alert and wait for these things to come to you. No longer is our patience tested by waiting in long queues for tickets to concerts and events - this virtue is now put to the test when we have to contend with overloaded servers when the tickets go on sale online.

The internet is as much about communication

“Now people have become accessible to the point where you can contact them almost anytime and anywhere.”

as it is about information. There are endless opportunities to participate, interact and work with other people through the internet. This is essentially the spirit of “Web 2.0” - internet services which generally encourage freedom, creativity and participation (social networking, collaboration, wikis, blogs, etc). It is plain to see how social networking has had an impact on the way we do things. No longer is it a great effort to keep in touch with fast-paced friends as they

change phone numbers, addresses, partners, jobs, countries, etc. With social networking sites, long lost buddies are usually only a few clicks away. Which can be good and bad.

Collectively, the internet and our favourite devices are defining an era as well as a generation. For the most part, people are taking control of technology and making the most of using it to support (rather than supersede) rich human relationships. Having said that, the way we use technology often comes down to personality,

lifestyle and age. As time goes by, we see devices make the transition from elite status badge or nerdy gadget, into a must-have accessory for the masses. When mobile phones were new - people were often critical when they saw someone using one, considering it as self-important and unnecessary. But now, we don't even look twice when we see this - in fact, some people feel that they risk social exclusion by not having a mobile phone. In the recent children's movie “Horton Hears a Who!”, this was illustrated when the Mayor's daughter asked: “Can I please have a who-phone Dad, everyone else in my class has one?”. When her father hesitates, she produces a photo of all her little classmates on their phones, while she was left standing alone.

In the past, technology has been unfairly accused for causing some of society's ills. It is our responsibility to make the most of it, and use it in positive ways. It has increased the availability of information, helped fight crime, improved healthcare and connected us with old friends and new. Having said that, even though the way that we are interacting with people is changing - social etiquette and common sense must not be forgotten. As we make our way along the upgrade trail, leaving behind a string of old devices and services in place of new shiny ones, we are defining an era in human society. At the same time, we are heading towards a future where we may be heavily dependent on things that seem radical and unnecessary to us today.

“It is difficult to see the picture when you are inside the frame.” – R. S. Trapp



World 2008

By Carrie Osborne

On 9 July, the mercury dropped and the westerlies picked up as the coldest week of the year arrived in Sydney. Arriving with the cold snap were around 180 higher-education Mac support staff, managers and administrators from all over Australia - not for the weather, but to attend the sixth annual AUC X-World Conference. The winter solstice is often backed up by low temperatures a few weeks later. Similarly, X-World follows the WWDC conference (held in the USA a few weeks prior) - giving attendees the chance to digest the announcements made at WWDC, and prepare to learn more about them at X-World.

With a lot of exciting movements happening in the Apple world - delegates were looking forward to sharing experiences with Leopard (10.5) and discovering more about Snow Leopard (10.6) - in addition to seeing how iTunes U is going, how to prepare for the iPhone and much more.

This year, the event kicked off with three feature presentations, all given by international speakers. Nader Nafissi (Apple, USA) took to the floor first and filled in a few gaps on announcements made at WWDC that did not receive as much attention as the iPhone 3G. After a quick re-cap of what we've seen in the last twelve months - attention turned to development and Snow Leopard Server features. Finishing with a humorous video on the history of Pi (where it was revealed that memorising Pi to 200 decimal places is not a good way to impress girls) - the audience gave a few laughs before bringing out some tough questions in the Q&A session.



Many of the attendees had very early flights to get to the conference - so Alexandre Bonucci (Lyon University, France) had the difficult task of retaining the audience's attention after lunch - which he tackled with ease. He shared with us a story on how his university went about setting up a 'digital working environment' - focusing on their podcasting solutions. The audience could identify with a lot of the problems (technical and non-technical) that his teams faced along the way, which made for an entertaining and informative presentation.

James Harper (University of Auckland, New Zealand) wrapped up with an outline on the development of their triple-booting Mac labs. He reflected on the pros and cons of different components considered for this project, and offered some advice on what types of problems can be expected when setting up triple-boot Macs. The presentation focussed on how his team built and implemented an in-house image deployment solution which takes advantage of BitTorrent technology.



The main social event - the conference dinner - was held on the first night on the top floor of the IMAX building, overlooking Darling Harbour. This provided the perfect opportunity to mix with other people doing similar work - many experiences and ideas were swapped over a fantastic meal.

A series of hands-on workshops and technical presentations form the core of X-World - covering a variety of Apple technologies (old and new). Most content was at an intermediate to advanced level, and attendees selected the sessions that they were most interested in. Drawing on industry experience, the presenters showed how to best integrate these technologies in higher education environments and factors (technical and non-technical) to watch out for. The opportunity to receive such specialised training and to talk directly to the experts, is very rare and was highly valued by attendees.

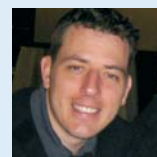
There were plenty of chances to catch up with other delegates and share what was being taught in different sessions. The iPhone, SOE and scripting workshops were among the most discussed topics during the breaks (as well as the iPhone itself, which was released on the last day of the conference). As encouraged at the conference opening - all attendees are likely to face similar issues at work, so this time was the perfect opportunity to help build a support network of colleagues from different areas.

Further to this, on the last day, Steve Plunkett (Deutsche Bank, Australia) gave a presentation which offered a fresh look at IT management from an industry that

uses different technologies to what most attendees would be involved with. He discussed factors that are important to IT in the finance industry (in particular, sustainability and stability), which can be scaled to suit other environments. His overview of IT from another angle was well received and it was appropriate to finish with a "big picture" view after looking at technologies in detail over the last few days.

A round table forum wrapped up the conference, which gave attendees the chance to ask a group of experts any final questions and provide feedback on the conference. On the whole, X World 2008 offered a great mix of presentations, workshops and interaction. Attendees left better equipped to

integrate Apple technology into their environments, more prepared for the arrival of new Apple products and having shared their experiences, knowledge and friendship with each other.



Name	Kate Disbury	Adam Murphy	Greg Turnbull	Danielle Pullin	Nick Golovachenky	Andrew McColl	John Fardoulis	Richard Smith
Uni	Wesley College	James Cook University	University of Western Sydney	University of Melbourne	University of Melbourne	Edith Cowan University	University of Western Sydney	Griffith University
What is your favourite Apple product (of all time)?	iPhone	iPod	iPod	My Apple branded card holder	iPhone/ iPod	eMate or maybe Clamshell iBook	Mac (in general)	Apple Pie (iPod Touch)
What was the last song that you put on your iPod?	Katy Perry	Latest Foo Fighters	Queen	Gnarls Barkley – Going on	Joan as policewoman	Metisse – Nomah		Cold Play – Viva La Vida
What is the most embarrassing song on your iPod?	Spice Girls	Old Foo Fighters	Faker – This Heart Attack	Dire Straits – Local Hero Soundtrack	Toto – Africa	William Shatner – Lucy in the sky with diamonds		Too many to mention Probably something by Celine Dion
What is your current desktop background?	Anime	JCU MOE Background	Tour de France – Ironman	A picture of a plastic toy gun in an ashtray outside City Lights bookstore in San Francisco after WWDC	My 2yr son Oscar	Lyra Telfer (my mates 18mth old) so cute	Picture of Sydney Apple Store	Photo I took on Fraser Island
What Apple product are you most like and why?	iPod – everybody likes me	PowerMac G3 (blue & white) – OLD and SLOW!	Mac Air – New / light	My G4 tower. Running slowly, badly needs some upgrades, losing memory but gets the job done.	iPhone/ iPod exchange connectivity	iBook 800Mhz, coz I'm old and decrepit		iPod Touch, kinda gimicky, but comes in handy for entertainment
What Mac skills are you hoping to develop at X-World this year?	Admin skills	Gathering more info on iTunes U and iPhone info	SOE/ Podcasting	Streamlining SysAdmin skills	Better understanding of podcasting	Learn more about SOE's and iPhone 3Gs	Programming (admin scripting and automator scripting) and general knowledge	iPhone Web Dev
What application would you like to see developed for the iPhone?	Teaching tools	Would like Bluetooth expanded		A geo-locator for my housekeys		Something to help teachers with outcomes based education reporting	Skype	WoW, movie player that supports more media formats.
What is your favourite part of X-World?	Learning about new technology	Dinner	Workshops	The dinner :P	The feature presentations all have been good	Found the presentation on peer to peer deployment of images really interesting. Also liked the workshop on SOE/ MOE	Workshops (hands-on)	The hands on time developing web apps for the iPhone

WWDC: The iPhone cometh



The AUC contingent made a side trip to University of California Berkeley to learn about its involvement in the Opencast academic capture and distribution effort.

Apple University Consortium scholarships sending staff and students to Apple's WorldWide Developers Conference (WWDC) have been running for many years, but this year's recipients got an unprecedented front-row view of one of the company's most eagerly awaited products ever.

Steve Jobs' keynote speech announcing the iPhone 3G, whose July 11 launch marks the first time the iPhone is officially available in Australia, was the highlight of the trip for Shu Ning Bian ("Steve"), an undergraduate research assistant at the University of Sydney.

It was Steve's first WWDC trip ever, made possible after he received a WWDC scholarship and joined the contingent of staff and students for the trip to join thousands more attending Apple's annual developer festival in San Francisco.

Yet while he's eager to start building for the iPhone, Steve's development interest was also piqued by the capabilities of Snow Leopard, the upcoming Mac OS X 10.6 release discussed for the first time at the show. He's keen on the possibilities of the OpenCL (Open Computing Language) built into Snow Leopard, as well as Grand Central Dispatch, Apple's next-generation thread management architecture that will make it easier to build applications that are seamlessly distributed across multi-core computing environments.

"The Mac is the primary platform on which I do nearly all of my data processing and report writing," Steve explains. "I'm already planning to use both OpenCL and Grand Central Dispatch in some existing projects to improve computation throughput."

Some 30 other students and staff joined Steve on the trip to WWDC, where they got the chance to rub shoulders with Apple's own developers as well as other development enthusiasts from around the world.

"Going to WWDC gets you a complete week to concentrate on one thing, which is sometimes difficult in a busy Web and media unit," says Angus Denton, senior Web producer for Learning and Teaching @ UNSW, where he has been involved in establishing the university's iTunes U presence. "WWDC gives you an 'industrial strength' immersion in various aspects of Apple technology as well as a lot of tips and tricks."

Angus nominated the HTML 5/CSS 3 insights, and coverage of the iPhone's WebKit foundation, as the most valuable parts of his first-ever WWDC. "I think the iPhone will have a huge impact here in Australia and offers many good

opportunities in higher education," he says. "I got a good sense of where HTML 5 was going, and I find Javascript accessible databases a real innovation. It's great that Apple has thrown its work in this area back into the open source project around WebKit, and has thrown its extensions to HTML and CSS to the W3C."

Strong technical content, and the many chances for networking, sparked many ideas for David Herbert, a senior computer systems officer in the School of Computing and Information Systems at the University of Tasmania.

A keen developer who administers several Mac labs and supports the School's Mac OS X Server-based Web site, David is interested in learning Cocoa and Cocoa Touch and made his first WWDC trip this year to pursue his interest. And while he nominates Steve Jobs' keynote as the most memorable part of the event, David found much to like across the agenda.

"The iPhone sessions were really very interesting and they certainly sparked my interest in developing something for the iPhone," he says. "And, as a large part of my job is system administration, the sessions I went to in that stream were probably of the most obvious and immediate use."



UNSW's Angus Denton

As his job also involves ongoing development of a number of Web applications that use heavy client-side scripting, David was pleased to learn about "the excellent Javascript debugging and profiling features of the next version of Safari (via WebKit), which

is of immediate value. I came back with a keen enthusiasm to finally focus on Cocoa, and to develop something really useful in the coming months."

The AUC group also took a side trip, visiting developers at the University of California Berkeley on June 13 to learn about their work in the Opencast community project. Recently supported by grant funding from the William and Flora Hewlett and Andrew W. Mellon Foundations, Opencast (www.opencastproject.org) is a consortium of universities working together to improve and standardise methods for capturing and broadcasting academic lectures and other content.

The team at Berkeley, which has been podcasting through its berkeley.edu site since early 2006, has developed an open source lecture and event capture system that works in conjunction with Apple's Podcast Producer. This puts it in a similar space as the Australian-developed Lectopia solution, which has become widely used across Australasian universities to drive automated lecture capture-and-broadcast services.

This excursion, which included a trip along the San Francisco Bay on the city's extensive BART (Bay Area Rapid Transit) trains, was icing on the cake for a WWDC trip that will rank among the most memorable for quite some time. AUC members brought back a load of ideas for development on the iPhone 3G, iPod touch, and Mac OS X, and the whole AUC community looks forward to seeing how those ideas manifest in the long run.

Tips & Tricks: Dashboard widgets

One of the great features of Mac OS X is the Dashboard, that overlay that appears over your desktop with a single mouse click and gives you access to a bevy of useful tools, bits of information, time-wasting games, system controls, and more.

Just how you configure your Dashboard is totally up to you – but if you haven't done so yet, it's probably time you spent a few minutes looking at what's available. Visit www.apple.com/downloads/dashboard to browse through hundreds of widgets, and you're sure to find some that will make your everyday activities easier, your work more efficient, and your desktop a more cheerful place to be. Here are 20 Dashboard widgets that are worth looking into; find them by searching for the download ID at www.apple.com/downloads.



Build A Snowman: Download ID 19510
It's winter, so why not build a snowman for your Dashboard by mixing 20 different items



ChessPuzzle: Download ID 6754
Got a bit of downtime? Challenge the computer to a game, or work out any of over 6000 chess puzzles



Chirp: Download ID 19553
See what your Twitter friends are up to, and easily enter your own updates through this mini-blogging widget



Del.icio.us Widget: Download ID 7898
Subscribe to bookmark feeds from del.icio.us, and easily browse and visit the sites from your Dashboard



emitSMS: Download ID 14198
Save yourself thumb pain: type your SMS into this gadget, and it uses Bluetooth to send it via your mobile



FacebookWidget: Download ID 19374
If Facebook is your thing, this widget will feed your addiction by tracking your friends on your Dashboard



freeComics: Download ID 18156
Streams Dilbert, Peanuts, Doonesbury and more than 100 other comics straight to your Dashboard



G-Ruler: Download ID 5970
One for the designers: onscreen ruler measures screen elements in pixels, picas, cm and inches



Gifraffiti: Download ID 6880
Draw your picture, click a button, and it becomes a wobbling animated .GIF for use on your Web site



GuitarChords: Download ID 7297
Learning guitar? This one will show you where to put your fingers to play any chord you request



Harmonic: Download ID 11183
Automatically displays the lyrics to the current iTunes song, and saves the lyrics inside the file



Language Translator: Download ID 18361
Translates text between 22 different language pairs using Google's language translation service



Last.fm Radio Widget: Download ID 17132
Interface to Last.fm Internet radio service makes it easy to listen to your favourite online radio stations



Mars Explorer: Download ID 19525
Fast-paced space racing laser tag game offering multiplayer support via LAN or Internet



MyTube: Download ID 15246
Search and watch YouTube videos on your Dashboard in high quality; download and import your favourites into iTunes with a single click.



Reversi: Download ID 6238
A minute to learn, a lifetime to master, and five seconds to load



SpeedyMarks: Download ID 16560
Create an index of your favourite Web sites, with graphical thumbnails of each page to simplify browsing



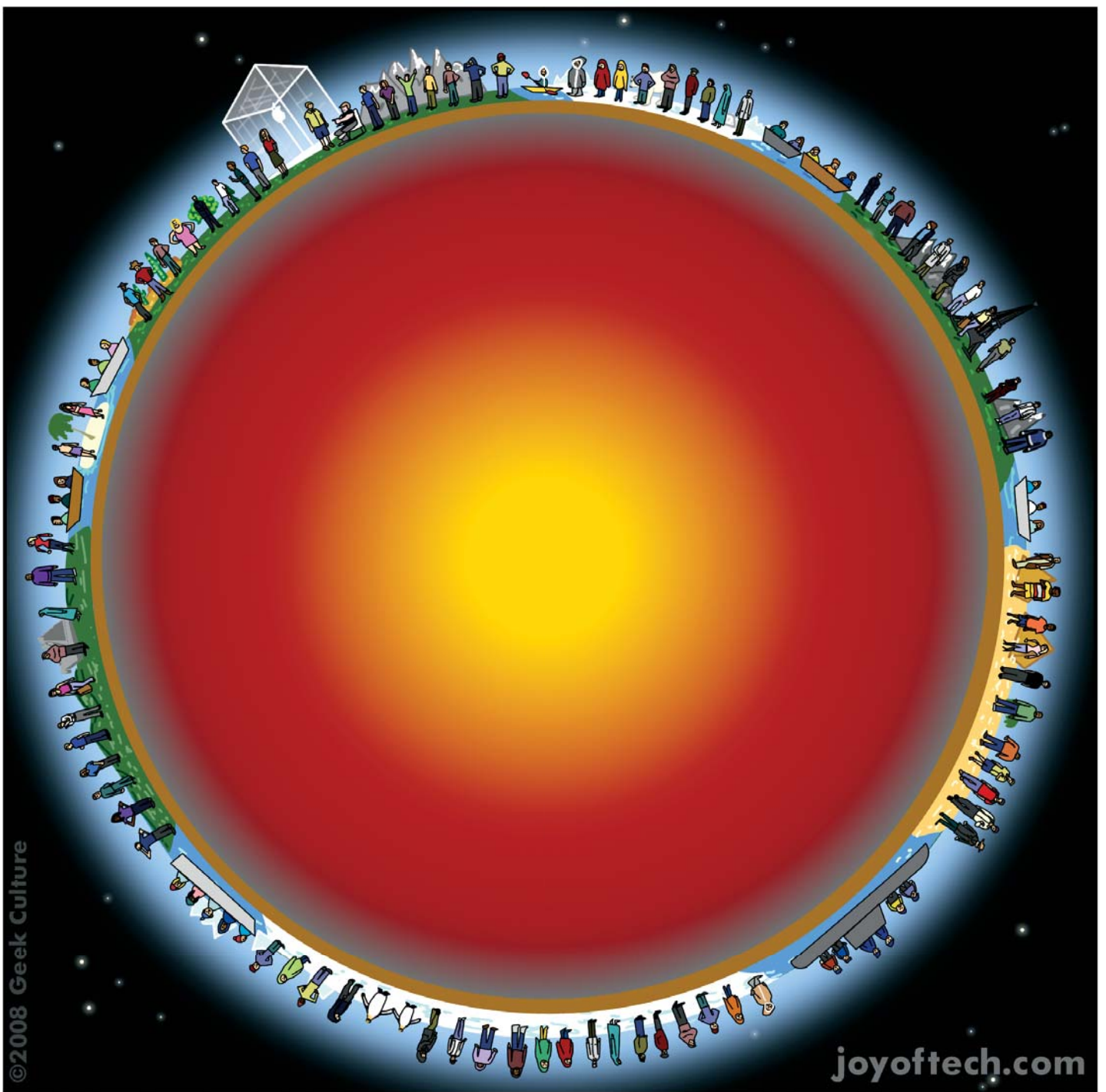
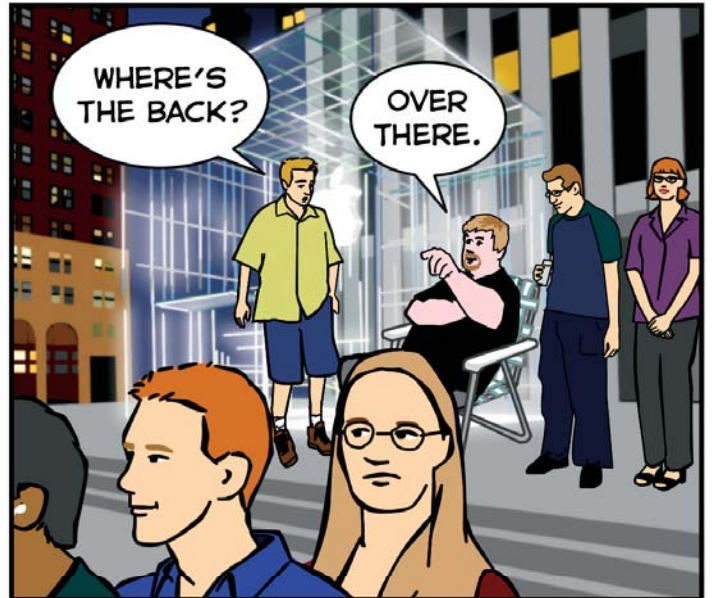
Sudoku Widget: Download ID 56
No computer is complete without this addictive classic, but we can't be held responsible for your lost hours



Web checker: Download ID 14729
Watches one or more Web sites for updates



Web monitor: Download ID 13953
Monitors the availability and response time of networked servers or Web sites



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CrossWORD Competition



Across

- 1 Captioning format in Final Cut Server (p11)
- 2 Where to get iTunes U content (p6)
- 4 This 2001 launch changed everything (p17)
- 5 These Kiwis burp a lot (p7)
- 6 Does maths on your graphics chip (p10)
- 10 iPhone foundation library (p24)
- 11 Gadget for Twitter-ers (p25)
- 14 Conservatorium's iTunes U output (p7)
- 15 Get animated with this (p2)
- 17 JCU's collaboration centre (p12)
- 18 Found iPhone migration simple (p10)
- 19 Aperture's picture noise reducer (p11)
- 20 These servers hold 6TB at UWS (p9)
- 22 iPhone seminars here (p4)
- 25 Sysadmins conference (p4)
- 26 The new .Mac (p10)

Down

- 1 New AUC affiliate here in 2000 (p16)
- 2 Multimedia suite introduced in 2003 (p17)
- 3 Number of AUC members in 2008 (p19)
- 6 Librarian maker (p2)
- 7 iTunes U Physics lecturer (p6)
- 9 Honours Scholarship Studiocode (p5)
- 12 Some do, he said, and some don't (p14)
- 13 This new-media content meets old (p8)
- 16 New Monash CMS (p13)
- 21 Creative _____, new in 2009 (p12)
- 23 RMIT multimedia studio (p8)
- 24 Gets your Mac back (p2)

WIN AN
IPOD
SHUFFLE



For your chance to win an iPod shuffle, 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 26th September 2008.

Congratulations

Congratulations to Heather Mann of The University of Melbourne for winning an iPod shuffle by correctly completing last issue's crossword to reveal the answer:

INNOVATION

An iPod shuffle is on its way.





Apple iPhone 3G

Plans / Accessories / Enterprise

Begin your Apple experience today
Onsite installation & staff discounts available



**iPods
from
\$65**



**Laptops
from
\$1,349***

iPods

Trade-ins / Repairs available

Heaps of accessories in-store



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sales@compnow.com.au

VIC - Chadstone	03 9568 8655	VIC - RMIT On-campus*	03 9654 8111
VIC - Doncaster	03 9684 3688	VIC - South Melbourne	03 9684 3600
VIC - Geelong	03 5223 2021	VIC - South Yarra	03 9824 2786
VIC - Malvern On-campus*	03 9508 2600	NSW - Crows Nest	02 9951 7979
VIC - Monash On-campus*	03 9684 3655	NSW - UNSW On-campus	02 9385 2746

*Special student & teacher discounts available, contact us for eligibility details & pricing.

Prices subject to change. Images for illustrative purposes only.E&OE



iPod trade-ins, repairs & batteries available.

Apple Platinum Service Centre