



/dev/world

**31 August - 1 September, 2015**  
**RMIT, Melbourne**





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# Welcome

Welcome to /dev/world/2015 - our biggest event since the AUC reinvented itself as an association towards the end of 2012. This is our 8th /dev/world, and we're thrilled at its growing support.

Once again we've partnered with RMIT, and we're deeply grateful to them for the outstanding facilities that they've made available for the conference. I'd particularly like to thank **Jason Lunghusen** and **Marcus Ransom** for all their support.

Special thanks are also due to:

- **Paypal/Braintree** and **Outware Mobile** for sponsoring the conference
- **Secret Lab** - thanks to Paris Buttfield-Addison and his pals Jon Manning and Tim Nugent, for contributing so much towards the organisation of this year's event.
- **Chris Neugebauer** for organising the lightning talks
- **O'Reilly Media** for generously providing all delegates with a free ebook, as well as a selection of prizes for some of our special events.
- Our **36 speakers** (a record!). Without them, there would be no conference!

If you see any of these people during the conference, please be sure to say thank them.

I hope that over the next 2 days you enjoy your time at /dev/world. We want it to be an event where you can build new friendships, renew old ones, gain new perspectives, and grow as a developer.

As you participate in this year's event, please remember that many of the speakers are no different to you - they have a passion for developing software and solutions with Apple technology, and are enthusiastic about sharing their knowledge and helping to support our community. With that in mind, I hope you might consider offering to present a session at next year's event!

I wish you a great conference!

Tony Gray,  
Chair, AUC

# Sponsors

## Gold Sponsor

As the Braintree\_PayPal developer and startup relations team, Braintree\_dev works directly in the field to educate and support the community about the Braintree and PayPal APIs and SDKs.

With unique programs including BattleHack, Startup Blueprint and Start Tank, Braintree\_dev engages with the community to mentor, support and enable seamless commerce experiences through easy integrations around the globe.

<https://developers.braintreepayments.com>

# Braintree\_*PayPal*

## Stainless Steel Sponsor

Outware Mobile specialises in mobile software design and development. We create intuitive, effective and engaging mobile experiences that make a difference by helping people get things done, be more productive, learn, grow and be entertained.

We've produced some of Australia's most popular apps including ANZ Grow, AFL Live, nib Health Insurance, Coles Mobile Wallet and many more.

Community and collaboration is an important part of our culture. That's why we participate in great events like /dev/world/2015 to share and learn from the wider community of mobile enthusiasts, technology junkies and other industry experts.

<http://www.outware.com.au>



## Aluminium Sponsor

*The team at Secret Lab have done an outstanding job in bringing /dev/world to life.*

Secret Lab is a mobile consulting and product development company based in Hobart, Tasmania. We focus on native iOS and Android apps and games for phones and tablets, as well as Unity games for a wide range of platforms.

<http://www.secretlab.com.au>



## Partner

RMIT is a global university of technology and design and Australia's largest tertiary institution, and enjoys an international reputation for excellence in professional and vocational education and outcome-oriented research.

RMIT has three campuses in Melbourne, two campuses in Vietnam and a centre in Barcelona, Spain, and also offers programs through partners in Singapore, Hong Kong, mainland China, Indonesia, Sri Lanka, Belgium, Spain and Germany.

<http://www.rmit.edu.au>



## Supporter

Thanks to O'Reilly Media for providing lots of great schwag for conference delegates.

<http://www.oreilly.com>



# About the AUC

The AUC was established towards the end of 1984 - originally as a partnership between Apple Computer and nine Australian universities. It was one of a number of similar partnerships established around the world.

At the heart of the relationship was the ability for departments, staff and students of member universities to obtain Apple technology at reduced prices and to enable the development of innovative solutions using the Macintosh. The concept of sharing information and experiences, and the ability to foster educational development activities were the major motivating factors.

The AUC quickly grew beyond these original concepts, forming a network of educational technologists across the universities of Australia and New Zealand. And while the consortia were eventually closed down, the Australasian partnership continued to thrive, growing to 37 member universities across Australia and New Zealand by 2012. Operating independently of Apple, it was governed by the member universities and operated its own programs on its own behalf.

The history of the AUC is one of adapting to changing circumstances, and in 2013 we have reinvented ourselves as a not-for-profit association of individuals. Our mission continues to be to support the staff and students of educational institutions by sharing experience, insights and know-how amongst members, developing people as leaders in the use of Apple technology, and inspiring and fostering innovative use of Apple technology in education.

Each year we hold three conference events for specific subsets of our community. **X World** is for system administrators, help desk and support staff, **CreateWorld** is for performance artists, teachers, digital artists and those working in the creative spaces, and **/dev/world** is for software developers.

Learn more at <http://www.auc.edu.au>

# Monday Schedule

	Interactive Theatre - Level 4	Cinema - Level 1	Duration
09:00	Registration, Coffee (level 4)		
10:00	Conference Opening		
10:15	<b>Maintaining Sanity and Code</b> Bogo Giertler	<b>Coding Secure Mobile Applications</b> Louis Cremen	45
11:05	<b>Let's Make a Multiplayer Game in Forty Minutes</b> Jon Manning	<b>Blissful Build Pipelines</b> Matthew Delves	45
11:55	<b>Intimate Interactions on Apple Watch</b> Phil Farrugia	<b>Once Upon a Time There Was an API</b> Steve Cooper	45
12:40	Lunch		
13:30	<b>Creating Custom Complications with watchOS 2</b> Chris Morris	<b>Intro to GameplayKit: Let's Play by The Rules</b> Jimmy Ti	35
14:10	<b>Testing and Test Methodologies within Xcode</b> Tim Raphael	<b>HTTP by the Numbers!</b> Christopher Neugebauer	35
14:50	<b>10,000 Test Cases Pass Before Every Release</b> Patrick Quinn-Graham	<b>Constrain in the Brain: Auto Layout Best Practices</b> Sebastian Beswick	35
15:25	Afternoon Tea		
15:55	<b>User Testing: Finding That One Thing Meatloaf Won't do for Love</b> Nic Wittison	<b>Canvassing the Web In The 3rd Dimension</b> Richard Deveraux	35
16:35	<b>Designing for Animation is Not as Hard as You Think</b> Stephanie Sharp	<b>iOS Apps with Go</b> Josh Deprez	45
17:25	<b>Physics and Other Tweaks Your Users Will Love</b> Tim Nugent	<b>Designable and Inspectable Views in Interface Builder</b> Ashton Williams	35
18:00	Free Time		
18:30	Pre-dinner Drinks - Elements Lounge at the Marriott Hotel		
19:00	<b>Keynote - The Future is Awesome (and what you can do about it)</b> Paul Fenwick		30
19:30	Dinner/Quiz		



# Tuesday Schedule

Schedule - Tuesday, September 1			
	Interactive Theatre - Level 4	Cinema - Level 1	Duration
09:00	Registration, Coffee (level 4)		
09:15	House Keeping		
09:20	<b>Social Interaction Over Shared Devices: Designing Interactive Story Apps for Children</b> Betty Sargeant		35
10:00	<b>Manage Your State</b> Mark Aufflick	<b>The Art of Seduction: Looking Beyond Usability to Create an Enjoyable App Experience for your Users</b> Zac Fitz-Walter	45
10:45	Morning Tea		
11:10	<b>A Cocktail of Fleeting Successes And Horrible Failures</b> Matthew Tonkin	<b>Paint All the Code</b> James White	45
12:00	<b>Swift as a First Programming Language</b> Sam Jarman	<b>iBeacons: Going Beyond the Buzzword</b> Judit Klein	35
12:40	<b>Diversity Through iOS Development: App Camp for Girls</b> Aimee Maree Forsstrom	<b>Now You're Thinking With Signals! A Reactive Cocoa Adventure</b> Jeames Bone	35
13:15	Lunch		
14:00	Lightning Talks		
14:45	<b>Mental Health in Technology &amp; Developers</b> Eloise Macdonald-Meyer	<b>Things Just Got Complicated: Extensions, Frameworks and App Groups</b> Adam Shaw	35
15:25	<b>Surveillance in a Mobile World</b> Tom Karpiniec	<b>Architecting Quickly With Swift</b> Andrew Dekker	35
16:00	Afternoon Tea		
16:20	<b>iOS Apps At Huge Scale</b> Luke Toop	<b>Working Functionally With Swift Optionals</b> Giovanni Lodi	35
17:00	<b>Introducing Realm: A Modern, Local Database Framework for Apps</b> Tim Oliver	<b>Using Hipster Functional Programming Techniques in Swift</b> Sam Ritchie	35
17:35	Conference Close		

# Session Details

10:15 Monday

## Maintaining Sanity and Code

Bogo Giertler - Dropbox

Drawing on experiences from teams as large as Dropbox and Spotify, and as small as your average startup, this session covers the best practices, engineering tools, and conversation starters for surviving in teams with remote engineers or many committers to a single HEAD.

*Bogo is an engineer at Dropbox. Steeped in Swedish design, American deadlines, and Italian coffee, Bogo built UIs at Spotify and IMs at Minus and Meebo. A purveyor of fine things, he swiftly commutes between Dublin, Ireland and San Francisco, CA.*

## Coding Secure Mobile Applications

Louis Cremen

With more than 75% of mobile applications in 2015 failing basic security tests, the session is a must-go if your application is in the Store or deployed internally. This talk will cover the ten greatest risks to mobile applications with examples, and you'll learn secure programming concepts and techniques that are a necessity for any deployed native application.

*Louis is the lead developer at the Centre of Digital Innovation of the mGovernment initiative in Dubai. His background is in iOS and Android development and he runs Apple Certified Trainer and mobile development courses. He lectures in mobile application development at the University of Wollongong, is a /dev/world veteran and the author of the free ebook "Mobile Application Secure Coding Guidelines".*

11:05 Monday

## Let's Make a Multiplayer Game in an Forty Minutes

Jon Manning - Secret Lab

In this session we'll talk about how playing games over the network impacts both your game's design and architecture, how to deal with latency and constrained bandwidth, and why variable lag is worse than the very devil himself. We'll be using Unity 5.1, which includes a host of new and improved networking features, to build a top-down shooter. At the end, you'll know how to design multiplayer gameplay, how to deal with the network, and you'll be seized with a bunch of ideas for games that you'll want to make yourself.

*50% of Secret Lab. I make games, write books, grow beards, research jerks on the internet at UTAS, and program little computers.*

## Blissful Build Pipelines

Matthew Delves

A story of going from frustration to bliss with automated testing and build pipelines so that apps can be shipped to the App Store with confidence. The talk will cover what has historically been the status quo with automated testing and then move on to modern approaches with a focus on lightweight services such as Buildkite to achieve a blissful relationship with automated build pipelines.

*Matt is an iOS developer from Melbourne who takes pride in well tested apps. Having worked with a range of different software languages and disciplines, he is able to take what is great from one discipline and apply it to another. He has a love from Swift as a language and will use non English characters in code where appropriate.*

**11:55 Monday**

## **Intimate Interactions on Apple Watch**

Phill Farrugia - Bilue

Interactions with information take on new forms with Apple Watch. This session covers ways of distilling the essence of your app into an engaging, useful and wearable experience. Use WatchKit to craft meaningful interactions that are subtle, deliberate and relevant to your users.

*Phill is an iOS developer at Bilue in Sydney. He is also a writer and occasional photographer, making up for his youth with excitement for the potential and promise of the future of personal technology.*

## **Once Upon a Time There Was an API**

Steven Cooper - PayPal/Braintree

Ever wanted to know the basics of how the PayPal and Braintree API's and SDK's work, and how they can be integrated into your code? In this session we'll cover all of the PayPal and Braintree API's and how they can be integrated with [insert language here]. Come see how we can not only integrate but also deal with debugging. This talk will be entertainment from the very beginning engaging young and old alike and suitable for all ages.

*Steven is a PayPal/Braintree Developer Advocate, and the guy at Developersteve.com. He's an overall full stack geek developer tech-head able to code tall buildings in a single bound.*

**13:30 Monday**

## **Creating Custom Complications for watchOS 2**

Chris Morris - Monash University

This session introduces the process of creating custom complications for the Apple Watch using ClockKit. Chris will discuss what a complication should be and demonstrate how to create one. He'll then explain the use of Timelines for integration with Time Travel feature on the Apple Watch, allowing users to see content your app will want to present in both the past and the future.

*Chris is a design and programming enthusiast with a keen interest in developing software and services based around user experience. He began programming when he was 10 years old, focusing primarily on web development. More recently he has turned his attention to learning about hardware and iOS app development, and was the recipient of an Apple's 2015 WWDC Student Scholarship.*

## **Intro to GameplayKit: Let's Play by the Rules**

Jimmy Ti - Queensland University of Technology

GameplayKit is a new framework introduced in iOS 9 and El Capitan for building games. It includes many tools to help with the various aspects of game development, such as AI, pathfinding, agent-based simulation, and rule systems. This session introduces GameplayKit and moves on to show how to adopt GameplayKit for games and why it is the greatest thing since 1-Up mushrooms.

*Jimmy is a Ph.D student at QUT. His research investigates the impact of mobile social network towards experience in public urban environments such as public transport. Jimmy, Zac Fitz-Walter and Tony Wang founded Eat More Pixels - a mobile app company that aims to create useful, beautiful and playful apps that improve our lives in creative and fun ways.*

## 14:10 Monday

### Testing and Test Methodologies within Xcode

Tim Raphael - University of Western Australia

This session covers both formal and informal test methodologies and how to apply them to iOS and OSX development with the tools included within Xcode. Attendees will gain knowledge in test theory and how to use it to better the quality of their apps.

*Tim is a student at UWA studying a Masters in Software Engineering. He also works as a Network Engineer for one of Australia's largest Cloud providers with a strong focus on software automation. iOS and Mac OS programming is a major hobby which often extends into university and work life - providing many interesting crossovers in software application.*

### HTTP by the Numbers!

Christopher Neugebauer

Are you writing an app that needs to do things over a network? Fetching data from an API? Grabbing profile pictures? Syncing stuff? HTTP is the ubiquitous protocol that runs the web, and basically every web-based API that's out there... but how well do we know how it works? What about on mobiles? This talk looks at HTTP performance on mobile devices, and tries to benchmark things. With code.

*Christopher works as an Android developer, which means his day job involves more Java than he would like. He is strongly interested in developing the Australian and International Python communities: he is director of linux.conf.au 2017, a past convenor of PyCon Australia, a board member of Linux Australia, and is a fellow of the Python Software Foundation. In his spare time he enjoys presenting on mobile development at open source conferences, and on open source development at mobile conferences.*

## 14:50 Monday

### 10,000+ Test Cases Pass Before Every Release

Patrick Quinn-Graham - Tokbox

This talk covers how TokBox went from complete manual testing of client SDKs to automating testing every supported platform and all historic supported releases with multiple endpoints in every test. Learn how we manage supporting 10,000+ permutations for each test case, and can ship new platform releases and updated clients confident they work with our customers existing applications.

*Patrick is a software engineer on the client team at TokBox, and has spent the last two years automating multi-endpoint tests.*

### Constrain in the Brain - Auto Layout Best Practices

Sebastian Beswick - Domestic Cat Software

With the release of the iPhone 6 and 6+, iOS developers have to support an unprecedented number of screen resolutions. This session examines best practices in the use of Auto Layout. We'll start with a basic introduction to Interface Builder, and show how best to use it to lay out views so that they look beautiful on any device. We then look at how to generate constraints in code, and finish by looking at common gotchas. This talk may contain moderate hip hop references. Attendee discretion advised.

*Sebastian graduated from UTas in 2012 with Honours in Computing, focusing on artistic computing via evolutionary sound synthesis. He has played with the Tasmanian Youth Orchestra and Grainger Wind Symphony, and has spoken at programming and artistic computing conferences, including TEDx Hobart. He currently works as an iOS developer at Domestic Cat Software. He doesn't particularly like hip hop, but has been known to occasionally spin Kendrick Lamar.*

**15:55 Monday**

## **User Testing: Finding That One Thing Meatloaf Won't do for Love**

Nic Wittison - Canva

In a world where every button is judged by how far away it sits from your thumb, how can we make sure our software is both useable and doing the things we want it to? Testing, testing and more testing is the answer. This talk explains the difference between qualitative and quantitative software testing methods and gives you an idea about which one is right for you (spoiler: it's both). It gives an overview of how we conduct testing at Canva and briefly covers how to write testing scripts for your testers to run through.

*Nic has been writing mobile apps for the past 7 years and currently works as an iOS Engineer for Canva in Sydney. He enjoys video games, talking about UX, and singing along to musicals when he thinks no one else is listening.*

## **Canvasing the Web in the 3rd Dimension**

Richard Deveraux - Mojo Collective

Did you know that you could render 3D objects (and animate them) on a HTML5 Canvas? This topic will look at Three.js, a Javascript 3D Library that leverages on WebGL to render and animate 3D on a HTML5 canvas. It will also look at supported and custom 3D data structures and touch lightly on how to roll your own GLSL shaders to create custom visuals.

*Richard has been coding since high school with multiple languages including Flash/Actionscript 3, Java, PHP, HTML/CSS and Javascript. He currently works as a professional web developer & designer while working towards publishing his own games on multiple platforms including iOS and Android.*

**16:35 Monday**

## **Designing for Animation is Not as Hard as you Think**

Stephanie Sharp - Odecee

App design is more than just static screens. Interaction and animation are important (and often overlooked) parts of the design process. We can use tools like Keynote to communicate and collaborate with both designers and clients. If you think Keynote is only for slides, this talk is for you too. We cover tips and best practices for adding animation to your apps. We'll explore how Keynote can be used to design custom animations and communicate user interaction by building a weather app prototype from scratch. You'll see how easy it can be to iterate on ideas and learn when and how to use animation to create a better user experience.

*Steph is a mobile engineer at Odecee in Melbourne. She spends most of her time making iOS apps, talking about UX and trying to convince people of the awesomeness of prototyping. In her spare time, Steph is also interested in e-commerce and model trains.*

## **iOS Apps With Go**

Josh Deprez - Google Australia

This talk introduces making iOS apps with Go, an experimental feature of Go 1.5. iOS apps are generally supposed to be made in Xcode with Objective-C or Swift, as God intended, but there's more than one way to skin an idiom. Go is a simple language invented at Google originally intended to replace C and C++, but has grown to the point where it can be suitable away from the world of server software. For the first time, in version 1.5, Go includes packages aimed at mobile development. This talk will introduce Go, how to get setup with gomobile on Mac for iOS dev, and how to use gomobile to produce both standalone apps and framework bundles usable inside Xcode projects.

*Josh is a software engineer at Google Australia. He has a PhD in mathematics from the University of Tasmania. He likes cats, but is unfortunately allergic.*

**17:25 Monday**

## **Physics, and Other Meaningless Tweaks Your Users Will Love!\***

Tim Nugent - University of Tasmania

This talk covers the use of physics and similar real world effects in your applications to make them, well more physical. Despite Apple's push towards ugly design, your users still like their apps to work the way the real world works and I think deep down inside Apple knows this. There is a slew of great APIs which are rarely used to make your App a lot more real feeling. This session talks about these APIs and other options you have from both a design and developer perspective.

\*User love is not guaranteed.

*You know who I am.*

## **Designable and Inspectable Views in Interface Builder**

Ashton Williams - Odecee

Ashton will be demonstrating new techniques in Interface Builder - Designable and Inspectable Views. He'll explain the practical uses, and point out problems and solutions, things to avoid, and work through a few examples making use of Designables and Inspectables.

*Ashton is a Mobile Developer at Odecee, he has been doing professional mobile development since 2012. He is a CocoaPods Core Contributor, as well as other open source projects. At Odecee he runs an internal monthly Mobile meetup.*

**09:20 Tuesday**

## **Social interaction over shared devices: Designing Interactive Story Apps for Children**

Betty Sargeant

Storybook apps can contain visuals, text and audio; audio narration commonly 'reads' the written text aloud. As a consequence, adults are not required to read storybook apps to children. Yet when adults do read books alongside children it can lead to deeper understandings of narrative content and to positive social bonding. In this talk Betty discusses how she designed her award winning children's storybook app *How Far is Up*. She describes the research behind her work and ways in which apps can be designed in order to foster social interaction to occur over shared mobile devices.

*Betty writes, illustrates and designs children's digital content. Her book app How Far is Up received a 2015 AIMIA finalist award, it was a finalist in the Victorian Premier's Design Awards (2014), and is under consideration for a Consensus Innovation Award (2015). As an independent developer, Betty is an invited member of the international industry organisations, KidsSafe and Know What's Inside.*

*Betty's app designs have received international recognition for the ways in which they foster adults and children to socially interact over a shared mobile device. She has a number of peer-reviewed publications as a result of her research in this area. She is a member of the RMIT Centre for Games Research. In her PhD, Betty investigated the design and the social ramifications of children's storybook apps. She also has a Bachelor of Education and a Bachelor of Arts (Hons. First class).*

**10:00 Tuesday**

## **Manage your State with Rigour, but Without Breaking a Sweat**

Mark Aufflick - The High Technology Bureau

Your code deals with asynchronous events all the time: UI, network, BLE, background processing, and more. State machines can help you reason with reality while making your code less fragile. In this session Mark looks at two types of state machines - Finite State Machines and Petri Nets - that help you write less code that is more self-documenting and ready for change.

*Mark is founder of The High Technology Bureau, a software development and process consultancy in Sydney. His consulting work spans finance, healthcare, real estate, social media and geological research. Mark is heavily involved in the iOS and Mac development community - he's organiser of Sydney CocoaHeads, co-chair of the YOW! Connected Program Committee, and co-organised Swipec Conference.*

## **The Art of Seduction: Looking Beyond Usability to Create an Enjoyable App Experience for your Users**

Zac FitzWalter - Eat More Pixels

It's one thing to make a usable App, but with so many on the Store, how do you make yours stand out and keep users engaged? This session takes you on a journey from usability to user experience (UX), presents techniques that can help improve the UX of your apps, and shares inspiring examples.

*Zac recently completed a PhD on UX and gamification design for mobile apps, presented on the topic at a number of academic and industry venues and will soon be teaching a masters subject at QUT entitled "Gamification and Persuasive Design". He runs gamificationweekly.com and is a cofounder of Empathy Studio and Eat More Pixels, both of which will be releasing gamified apps later this year.*

**11:10 Tuesday**

## **A Cocktail of Fleeting Successes and Horrible Failures**

Matthew Tonkin

This talk covers my experiences, and the experiences of those I know, in launching (and not launching) software titles on Macintosh & iOS - a mixture of anecdotes, funny stories, tales of stuff that didn't work (but should have), stuff that did work (but shouldn't have), and riding the Silicon Valley roller coaster.

*Matt has been making software for OS X since Xcode 1.0 in 2003, was the principal engineer for Sketch and is currently an OS X engineer for Evernote. In 2014 he returned to Australia after a 6 year stint in Silicon Valley where he worked for startups in both engineering and product management roles.*

## **Paint All the Code**

James White - Curtin University

iOS was once a single screen size platform, brought to you by the magic numbers 320 and 480 - it was easy to create a pixel perfect UI. Over the years the platform has evolved to support multiple screen resolutions, requiring image assets at myriad different sizes. Our designers are working their beautiful fingers to the bone, and our bundles have never been so big. PaintCode takes your artwork and turns it into resolution-independent CoreGraphics code, which you can drop straight into your apps. You get crisp graphics on any screen, and the ability to do things that would otherwise require many static files.

*James is an iOS developer and designer, with the correct order of those terms a matter of debate. He makes apps primarily of a healthy nature, including as part of his PhD examining social apps in health promotion. He recently received his second student scholarship to attend Apple's WWDC.*



**12:00 Tuesday**

## **Swift as a First Programming Language**

Sam Jarman - Carnival Mobile

In New Zealand, students are encouraged to use a text based programming language in their final two years of high school to complete their units of work. The popular choices are Python and JavaScript. This session looks at Swift as a possible option and evaluates it as an introductory programming language.

*Sam has been writing iOS apps since he was 17. By 18, he had over 10 apps on the store. While at University, he discovered a passion for education. He has completed research, published papers and produced books and guides on the topics of teaching computer science and programming. He is the maintainer of CS Unplugged and a contributor to the Computer Science Field Guide.*

## **iBeacons: Going Beyond the Buzzword**

Judit Klein

On a technology level, iBeacons are little more than a bluetooth low energy device and an extension of the CoreLocation framework. They're an easy, low power way to implement fine grain region monitoring. This session will look at some practical examples of iOS apps that use beacons, tips for getting more accurate results, and how you can use them in contexts beyond retail.

*Judit is qualified Creative Technologist based in New Zealand, currently working as a freelance writer of code and pusher of pixels at Cactuslab in Auckland. She's been developing for iOS since she first attended /dev/world in 2010 and in her spare time works on research and development of apps for collaboration and education technology.*

**12:40 Tuesday**

## **Diversity Through iOS Development - App Camp for Girls**

Aimee Maree Forsstrom

A while ago in Portland, Jean MacDonald came up with the idea of code camps run by women to help introduce more girls to App development on iOS. This talk covers the use of Apple technology in the Camp Curriculum Design, and how iOS provides a way for students to approach software development. It also looks into the diversity aspects of running a code camp for women by women, and how the platform designed by Jean is helping to break down code barriers for youth.

*Aimee Maree Forsstrom is a Web Solutions Designer, Mobile/Web Developer and Open Source Advocate who teaches kids to code, having helped more kids write iOS apps than she has or ever will write herself. She currently teaches IT Entrepreneurship for the University of Adelaide Autism Spectrum Youth Research Project. Recently she was living in the USA where she worked with Mozilla and volunteered teaching code for OSCON Kids Day and App Camp for Girls first Seattle camp.*

## **Now You're Thinking with Signals! A Reactive Cocoa Adventure**

Jeames Bone - Outware Mobile

"Functional Reactive Programming (FRP)". This is the story of a programmer's journey from being utterly terrified of those three words to riding along side them into daily battle with Xcode and the beast that is Cocoa. FRP can be an amazing tool for creating code that is readable, re-usable and all around less spaghettiified. It can be tricky to know where to start, and it's difficult to fathom the true power of the paradigm even for the most seasoned of funtionauts. I hope to show a glimpse of what is possible using ReactiveCocoa in Swift, and explore how FRP can be applied to common problems coding in Cocoa.

*Jeames is a software engineer working on awesome iOS apps at Outware Mobile in Melbourne. His passions are programming and singing, often at the same time.*



14:45 Tuesday

## Mental Health in Technology & Developers

Eloise "Ducky" Macdonald-Meyer

This talk will explore the pressures and impacts that development can have on mental health, and the strategies developers and their workplaces can use to support those who may be suffering. Parts of the development process can lead to situations where looking after yourself can be difficult, and it is important not only to be able to minimise the risk of these, but to be able to recognise and find ways out of them. This talk will also discuss the rise and continuity of technology to assist in mental health.

*Eloise, aka Ducky, is currently a student at the University of Tasmania. She studies a double degree with majors in Games Technology and GIS, and is especially excited about anything that combines them. She at local Tasmanian web agency Takeflight. Some of her other interests include; playing & making games, teaching kids how to code, and being involved in her local tech communities.*

## Things Just Got Complicated: Extensions, Frameworks, and App Groups

Adam Shaw - Kabuki Vision

Things used to be simple... you had an Xcode project, it contained a target, which built an app. But with the introduction of App Extensions in iOS 8, things have become a lot more complicated with multiple extensions, targets, app IDs, and frameworks. This session covers everything you need to help unravel the complexities of this new world of app architecture.

*Adam has been making apps since the launch of the App Store in 2008. An Apple nerd through and through, he believes that building great iOS apps is pretty much the most awesome job in the world, and strives to pass this on to others. His company Kabuki Vision has released a number of noteworthy apps over the years such as NoteMaster and Dressed. His latest obsession is pushing WatchKit to it's limits.*

15:25 Tuesday

## Surveillance in a Mobile World

Thomas Karpiniec - Asdeq Labs

Whenever you use your phone there are various organisations vying for information—criminals, the government, foreign governments, and companies. In this talk we discuss what it means to have privacy when you carry a tracking device in your pocket, what the threats to that privacy are, and the steps that app and platform developers can take to make a meaningful impact on their users' security.

*Tom is a developer at Asdeq Labs in Hobart where he spends most of his time in Xcode. He chaired the Policy & Research Committee at Electronic Frontiers Australia last year and co-organised the first CryptoParty in Hobart. He has two cats and still likes Objective-C.*

## Architecting Quickly with Swift

Andrew Dekker - University of Queensland

This talk presents the setup and architecting process that we follow to create iOS applications. With this process, we can develop the code structure, interaction, navigation and process to get code on-device as quickly as possible. We discuss many aspects of getting this setup, including storyboards, git, API structure and popular libraries. The talk will focus on Swift, and how to move from Objective-C in your next project. The goal is to create discussion around different approaches to architecting iOS Apps.

*Andrew is a PhD student at the University of Queensland in Computer Science/Interaction Design. Andrew also works as the senior developer for UQx, UQ's collaboration with edX. Andrew is an interdisciplinary hacker, with degrees in IT, Multimedia Design and Interaction Design.*

16:20 Tuesday

## iOS Apps at Huge Scale

Luke Toop - Sportsbet

This talk covers the challenges faced when your app is used by hundreds of thousands of users millions of times per week to broker financial transactions worth around \$1 billion dollars per year, and will outline some of the approaches Sportsbet has taken to make, update and maintain an award- winning, 4.5 star-rated application despite what sometimes seem like impossible odds!

*Luke is a passionate software engineer who has been in love with Objective C for 10 years, co-founding a startup which used OS X before the launch of the iPhone. He now works as the iOS Development Resource Manager at Sportsbet, creating fun, fast and productive environments for teams of developers.*

## Working Functionally with Swift Optionals

Giovanni Lodi - mokacoding

One of the biggest differences between Swift and Objective-C is the presence of Optionals. Optionals can help you keep your code safer, but they need some house keeping. In this talk we will explore techniques to work with Optionals in a simpler way, leveraging other Swift's features. We are then going to see how these techniques are actually functional programming concepts, demystifying them.

*Gio is a freelance iOS developer, and blogs about testing and automation at <http://mokacoding.com>. Before moving to Australia he worked in the London start-up scene. He is always looking for something new to learn, from functional programming, to cosmology and solving the Rubik's cube. He also is a big Teenage Mutant Ninja Turtles fan.*

17:00 Tuesday

## Introducing Realm: A Modern, Local Database Framework for Apps

Tim Oliver - Realm, Inc

When it comes to developing apps on iOS, saving data locally to the device is deceptively trickier than it should be. Core Data has a very steep learning curve, and SQLite requires a lot of boilerplate code to become usable. Realm is a new database framework supporting both Objective-C and Swift, designed to serve as a much easier alternative to Core Data and SQLite. This talk serves as introduction to using Realm - topics include defining object schema, persisting objects to disc, and concurrent access.

*Tim has been an avid fan of iOS since the time of the iPhone 3G, and has been working as a full-time mobile developer since 2013. Presently, he works remotely for Realm out of Perth, and spends his free time working on iComics, his own personal app project.*

## Using Hipster Functional Programming Techniques in Swift

Sam Ritchie - codesplice

Functional Programming - hipster fad or software saviour? This session will introduce some core functional techniques and show that adopting them in your Swift code is simple, natural, and easy to understand. You'll also see examples of how applying a more functional approach can solve common problems and annoyances, and result in a smaller and more maintainable codebase.

*Sam has been a software developer for 15 years and an Apple fanboy for nearly 30. He runs his own software consultancy specialising in cloud & mobile development, and organises the Perth iOS Developers meet-up group.*

# Conference Dinner



/dev/world sessions will be held in the RMIT SAB (Swanston Academic Building), on Swanston St., between La Trobe and Franklin Streets.

The conference dinner & quiz night will be held at the **Melbourne Marriott Hotel**, at the corner of Exhibition & Lonsdale Streets - 750 metres from the SAB or about 10 minutes walking time.

Welcome drinks will be served to /dev/world delegates from 18:30 in the Elements Lounge, and the dinner keynote will commence at 19:00.

**Please ensure that you wear your name tag at the conference dinner.**

# General Information

## Meals & Catering

Morning and afternoon teas and lunch will be served near the SAB Interactive Theatre on level 4.

The caterers have been provided with special dietary requirements as specified by delegates at registration time.

## Lightning Talks

Lightning Talks are a tradition at /dev/world, and this year will be held after the lunch break on Tuesday in the SAB Interactive Theatre on level 4. **Please do not bring food into the Theatre.**

Speaker slots are limited - if you wish to participate, send your name, talk title, and presentation slides to **Chris Neugebauer** ([chrisjrn@gmail.com](mailto:chrisjrn@gmail.com)) before noon on Tuesday September 1.

## Internet Access

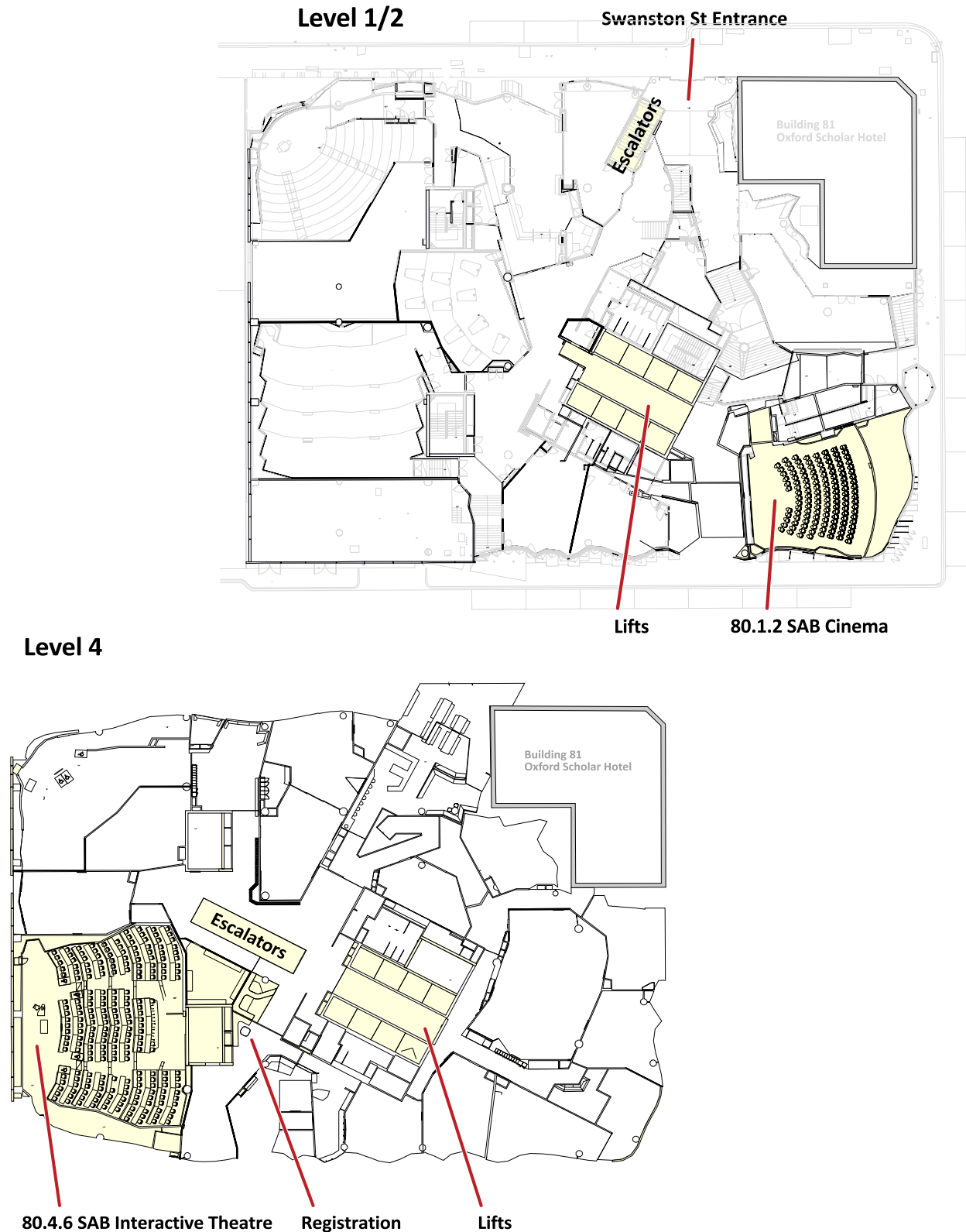
Wireless internet access is available at RMIT. Your logon details will be provided when you register.

## RMIT Campus Security

- dial 53333 (from internal telephones)
- dial 9925 3333 (from external telephones)

# SAB Floor Plans

/dev/world sessions will be held in the SAB Interactive Theatre on level 4, and the SAB Cinema on level 1. You can use the escalators or the lifts to move between rooms at changeover times.



# Notes



