ADOBE FLASH© software – Mobile Application, myths and reality

John Morris

Higher Education and Skills Group Fellowship

An ISS Institute Fellowship sponsored by

Higher Education and Skills Group,
Department of Education and Training, Victorian Government.

i. EXECUTIVE SUMMARY

The aims of this Fellowship where conceived in 2011, the Fellowship was awarded in early 2012, and the Fellowship research undertaken in 2013. The mobile development industry is a rapidly evolving industry. Over the course of Fellowship's research and reporting and preparation of this report many things changed / developed in this industry, some of which impacted on the Fellowship outcomes

When the Apple iPhone was released into the consumer marketplace on 29th June, 2007, Steve Jobs (the CEO of Apple at that time), announced that the iPhone and its software would not support Adobe Flash content. Concurrent with this announcement, Adobe flash was a highly used application for the development of rich interactive media on the Internet. As a result of this announcement, many developers overlooked Adobe Flash as a mobile development software platform and overall Adobe Flash use began to decline. Adobe AIR was released by the Adobe organisation on June 10th, 2007. By 2009 deployment of rich interactive media content created with Adobe Flash to Adobe AIR was included in Adobe Flash. In November 2011, Adobe announced the focus of Adobe AIR would be on development of applications for various mobile stores.

During the period between Morris' Fellowship being awarded and his travel to San Francisco in 2013, Morris experienced many people who believed that Adobe Flash was not compatible with mobile application development. At the same time, Adobe was actually launching new software aimed at dynamic web and mobile content development while adding mobile development processes to some of its existing software range.

The Adobe head office is located in San Jose, California, approximately 80 kilometres from San Francisco, in an area well known as a centre for the development of technology. The Fellow aimed to meet with and discuss the use of Adobe Flash with mobile developers and a highlight of the Fellowship trip was to be a visit to Adobe office in San Francisco. Morris was however disappointed by the overall experience; the duration of this meeting was far shorter than originally organised and was held in the Adobe San Francisco office canteen.

Morris's other meetings in the San Francisco area unfortunately did not lead to any direct contact with developers of mobile applications using Adobe Flash. Many he met with still repeated the view that, "Adobe Flash is not suitable for mobile application development software".

However, the software development conference (DevCon) he attended in part at least made up for this disappointment. Morris was able to absorb much information and the approaches being used by many developers of mobile applications. The Fellow has also taken the opportunity to include many acronyms and definitions used by the Mobile Development community that may help readers better understand the complexity of this area of computer systems and software development.

TABLE OF CONTENTS

ii. ABBREVIATIONS/ACRONYMS

2D	Two-dimensional
3D	Three-dimensional
App (or app)	Computer Application – the commonly referred to term meaning computer Application
AMPLI	Annual Australian Mobile Phone Lifestyle Index
CAD	Computer Aided Design
DevCon	Development Conference
HTML5	Hyper Text Mark-up Language
iOS	iPhone Operating System
JSP	Java Server Pagers (see definition below)
JSF	Java Server Faces (see definition below)
OS	Operating System
PDA	Personal Digital Assistant
RoR	Ruby-on Rails (see definition below)
TAFE	Training and Further Education
UI / UX	User Interface / Updated User Interface

iii. DEFINITIONS

3D Modelling

The process of developing a mathematical representation of any three-dimensional surface of object (either inanimate or living) via specialised software.

Android

A Linux based operating system designed primarily for touchscreen mobile devices such as smartphones and tablet computers. Initially developed by Android Inc., which Google backed financially and later bought in 2005.

App

Specific computer application commonly used in reference to Mobile computing applications.

Cloud computing or 'The Cloud',

Is a colloquial expression used to describe a variety of different types of computing concepts that involve a large number of computers connected through a real-time communications network (Internet).

DevCon

The annual Development Conference (DevCon) is a computer industry conference dedicated to enabling developers to meet and discuss with the most knowledgeable speakers, the latest research and inspiration for their development career. The fundamental objective of this conference is to generate the opportunity to meet with like-minded experts over three days of educational and informative workshops, case studies presentations and open discussion.

HTML5

The fifth update of a computer language used for structuring and presenting content for the World Wide Web and a core technology of the Internet.

iOS

A mobile device operating system developed and distributed by Apple Inc. (previously iPhone OS).

JSP

A Java view technology running on a server machine that allows you to write template text in side languages like HTML, CSS, JavaScript.

JSF

A component based MVC framework built on top of the Servlet API and provides components, which can then be used in JSP or any other Java based view technology.

Multimedia

Media and content that uses a combination of different content forms. Multimedia includes a combination of text, audio, still images, animation, video, or interactivity content forms.

iii. DEFINITIONS

Node

In communication networks, a node is either a connection point, a redistribution point or a communication endpoint.

Ruby-on-Rails

An open source web application framework which runs on the Ruby programming language. It allows creating pages and applications that gather information from the web server, talk to or query the database.

Smart Phone

A mobile phone built on a mobile operating system, with more advanced computing capability and connectivity than a feature phone. The first smartphones combined the functions of a Personal Digital Assistant (PDA) with a mobile phone. Later models added the functionality of portable media players, low-end compact digital cameras, pocket video cameras, and GPS navigation units to form one multi-use device. Many modern smartphones also include high-resolution touchscreens and web browsers that display standard web pages as well as mobile-optimised sites.

Social Network

A social networking service is a platform to build social networks or social relations among people who, for example, share interests, activities, backgrounds, or real-life connections, primarily accessed via the internet.

1. ACKNOWLEDGEMENTS

John Morris thanks the following individuals and organisations that have generously given of their time and their expertise to assist, advise and guide him through this Fellowship program.

Awarding Body – International Specialised Skills Institute (ISS Institute)

The International Specialised Skills Institute (ISS Institute) is an independent, national organisation. In 2015 it is celebrating twenty-five (25) years working with Australian governments, industry education institutions and individuals to enable them to gain enhanced skills, knowledge and experience in traditional trades, professions and leading edge technologies.

At the heart of the ISS Institute are our individual Fellows. Under the Overseas Applied Research Fellowship Program the Fellows travel overseas. Upon their return, they are required to pass on what they have learnt by:

- Preparing a detailed report for distribution to government departments, industry and educational institutions
- Recommending improvements to accredited educational courses
- Delivering training activities including workshops, conferences and forums.

Over 300 Australians have received Fellowships, across many industry sectors. In addition, recognised experts from overseas conduct training activities and events. To date, 25 leaders in their field have shared their expertise in Australia.

According to Skills Australia's 'Australian Workforce Futures: A National Workforce Development Strategy 2010'.

> *Australia requires a highly skilled population to maintain and improve our economic position in the face of increasing global competition, and to have the skills to adapt to the introduction of new technology and rapid change. International and Australian research indicates we need a deeper level of skills than currently exists in the Australian labour market to lift productivity. We need a workforce in which more people have skills and knowledge, but also multiple and higher level skills and qualifications. Deepening skills and knowledge across all occupations is crucial to achieving long-term productivity growth. It also reflects the recent trend for jobs to become more complex and the consequent increased demand for higher-level skills. This trend is projected to continue regardless of whether we experience strong or weak economic growth in the future. Future environmental challenges will also create demand for more sustainability related skills and knowledge across a range of industries and occupations.*

In this context, the ISS Institute works with our Fellows, industry and government to identify specific skills and knowledge in Australia that require enhancing, where accredited courses are not available through Australian higher education institutions or other Registered Training Organisations. The Fellows' overseas experience sees them broadening and deepening their own professional knowledge, which they then share with their peers, industry and government upon their return. This is the focus of the ISS Institute's work.

For further information on our Fellows and our work see http://www.issinstitute.org.au.

John Morris also thanks the CEO (Bella Irlicht AO) and staff (Ken Greenhill and Paul Sumner) of ISS Institute for their assistance in planning and development of the Fellowship and completion of this report.

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1. ACKNOWLEDGEMENTS

Fellowship sponsor

The Higher Education and Skills Group (formerly Skills Victoria), Department of Education and Early Childhood Development, Victorian Government is responsible for the administration and coordination of programs for the provision of training and further education, adult community education and employment services in Victoria and is a valued sponsor of the ISS Institute. John Morris thanks them for providing the opportunity to undertake this international research Fellowship.

Employer Support

Swinburne allowed the Fellow time to travel to San Francisco during the non-teaching period.

Organisations Impacted by the Fellowship

The games and application development industry is a rapidly changing industry, with new technology and software aimed at making the processes easier and similar launching frequently.

Developers of mobile software and technology must keep up to date with changes that will assist them and avoid technology and software that may hinder their work-flow.

This Fellowship focussed on technology and software developed by Adobe, to assist developers. Utilisation of Adobe Flash and AIR may benefit some developers and not others.

The Fellow hopes that Adobe will continue to refine its software, knowing that it has a place in the industry to assist with development of games and business applications at an appropriate level.

Government

Australia has a strong vibrant and growing mobile content development industry. Even with radical changes in government funding models the industry is still developing content that is a global export. A game or application developed in Melbourne can be published on a global marketplace and purchased in many countries around the globe.

Industry

The mobile game and application development industries in Australia use a range of software to produce their projects. The use of the Adobe software discussed in this Fellowship is not widely used in the industry, but there are some businesses that are able to utilise the software features for their productions. Due to the dynamic nature of IT software and production in general this will continue to be the case, with one software package being the preference for a majority of companies for a time then that same software package will be replaced for another.

Education and Training

Higher Education, all TAFE and private RTOs involved in the teaching of Mobile computer applications.

Community

Users of Mobile communication devices (such as smart phone and android devices).

2. ABOUT THE FELLOW

Name:

John Bernard Morris

Employment:

Digital Interactive Games & Digital Media Teacher, Swinburne University of Technology TAFE.

Qualifications:

- Advanced Certificate of Art & Design, Frankston TAFE, 1992
- Certificate IV in Workplace Training & Assessment, Swinburne University of Technology TAFE, 1999
- Certificate IV in Training & Assessment (YTAA40104), Swinburne University of Technology TAFE, 2011.

Memberships:

- Digital Industry Association for Australia (AAMIA)
- Independent Game Developers Association (IGDA), Melbourne

Short Biography:

Morris' career began in 1991 when he enrolled in an Advanced Certificate of Art and Design at Frankston College of TAFE. The course was one of the first in the state to introduce Computer Aided Design (CAD) to its curriculum, which later became known as Multimedia. Using what now seem like primitive computers, Morris dove head first into the computer aided design units. He set personal goals and objectives and then began developing the solutions required, in this new form of design. Staff used many of the projects he developed for himself in 1991 the following year as class assignments. For example, combining two separate digital images into one required the remapping of the limited colour pallet to support the second image (today's digital imaging software does not have such limitations).

Following the successful completion of the Advanced Certificate of Art and Design in 1992, Morris searched for a job in the computer graphics industry. While searching for work, he devoted spare time to learning a new 3D modelling and animation application called 3D Studio (later to become Autodesk 3DS Max). His first job utilising these new skills as a 3D computer artist was in late 1993 for a video production company SuperVision Productions. During his time there he met some talented individuals and learned a great deal about the Film and Television industry.

In an effort to grow his industry contacts he established the 3D Studio user group in Melbourne. Morris organised group meetings of fellow 3D Studio users and guest speakers. The contacts made from forming this group lead him to become a freelance 3D Artist.

During his years as a freelance 3D artist he worked on a wide range of projects, including television commercials for Nestle, architectural and engineering visualisations, 3D animations for the Museum of Victoria and video game characters and animations.

In the late 1990s Morris saw a need for experienced and skilled teachers in the TAFE system and began working part time at Frankston TAFE. This gave him his first taste of training students and he enjoyed introducing students to some basic computer design processes and then observing the impact it had on their learning and ideas.

In 1998 Morris began working full time as a Multimedia Teacher for Outer Eastern College of TAFE (now Swinburne University of Technology TAFE) and assisted in launching the Multimedia course in 1998-99. Morris focused on making sure that students were exposed to and learning industry standard

1. ACKNOWLEDGEMENTS

software like 3D Studio. During his employment at Swinburne, he has focused on a number of areas including 3D modelling and animation, 2D animation, interactive design, video production and website development.

Currently Morris is focusing on the development of mobile content and the training requirements. Utilising new features of Adobe software that he has been using for many years, his aim is to implement mobile games development and business application development into the courses that he teaches.

3. AIM OF THE FELLOWSHIP PROGRAM

The Fellowship allowed Morris to investigate and learn how to utilise the features of Adobe Creative Suite CS6 to produce Mobile Games and Applications, in particular:

- Use Adobe Flash CS6 and Adobe Air to produce and publish mobile games for IOS (iPhone & iPad), Android, smart phones and tablets

- Use Adobe Dreamweaver CS6 and PhoneGap to produce and publish, mobile applications for IOS (iPhone and iPad), Android, smart phones and tablets

- Use Adobe Dreamweaver to produce and publish mobile accessible websites for IOS (iPhone and iPad), Android, smart phones and tablets

- Using Adobe InDesign to produce and publish interactive mobile content for IOS (iPhone and iPad), Android, smart phones and tablets.

(Unfortunately, the fourth objective relating to use of InDesign was not able to be satisfied during this Fellowship research due to the lack of co-operation and non-availability of the overseas experts in this area initially confirmed to see Morris).

Adobe released Creative Suite 6 (CS6) in early 2012. In this release Adobe expanded on its mobile development abilities, previously only available via Adobe AIR and Adobe Flash CS5. Included in the Adobe CS6 release was Adobe Dreamweaver and Adobe PhoneGap; together both applications can generate a website scalable for mobile and or a mobile application.

During 2012 Adobe also released the Adobe Creative Cloud. A computer 'cloud' based system with new applications, including Adobe Edge Tools and Services, which also support mobile development. Currently the Adobe creative cloud contains the latest releases of the Adobe creative suite of software, known as the Creative Cloud edition or CC.

The use of mobile devices by almost everyone in any area of business or private life is continuously increasing, and therefore the demand to generate mobile content and applications will also increase accordingly. Adobe and its range of software offer a developer a number of ways to develop mobile content. As Adobe continues to refine and improve its suite of software the demand for training in the use of that software needs to be met.

4. THE AUSTRALIAN CONTEXT

Australian Bureau of Statistics reported in 2011 that there were 9.7 million mobile handsets in Australia.[1] With a 2011 population of approx. 22 Million that is almost one mobile hand set for every two people in the country.

The mobile content development industry is very broad in Australia. There are a large number of independent developers, small business and some large successful business in the country. The Age newspaper reports, 'Gaming is worth $1.5 billion in Australia and is tipped to be worth more than $90 billion globally by 2015, almost three times as much as worldwide cinema box office in 2011'.[2] The Age also14 reports, 'There are about 160 small studios in Australia - developing cheap arcade-style games, many for the rapidly growing mobile and tablet market'.[3]

The AMPLI 2012 Report highlighted, '76% of respondents were Smart phone users – 40% Apple (up 8% from 2011), Samsung 18% up 5%'. The report also highlighted, '72% of respondents used their mobile device for Entertainment a 10% increase from 2011. 14% of respondents played a game at least once a day and 74% of respondents downloaded game apps, 46% paid for games'. The AMPLI 2012 Report commented, 'Games' is by far the most commonly paid for type of application. This is not surprising as games tend to be more transient in terms of use, compared to other types of applications (e.g. a person using social network applications is likely to continue to use a single or limited number of applications, while a person using a game may change the type of game played frequently). Also of interest is just over half of the respondents that use games, pay for them'.

Many people both inside and outside the industry are aware of the incompatibility of Adobe Flash and the iOS platform (for Apple iPhone and iPad). What some are not aware of is Adobe has developed software to address this. Through the use Adobe AIR, application design, coding and deployment, can be complied to work on the Apple iOS platform.

Morris participated in discussions with people in the web development sector, during which the incompatibility issue was raised and he mentioned the processes Adobe had introduced. The lack of awareness of this process is what directed Morris to this Fellowship.

Adobe has since incorporated a range of new features and applications that make it easier for users to publish their work onto mobile devices. Taking into consideration the volume of industry people that use Adobe software every day in their work, it is evident to Morris that there is a need to make sure they are aware of the current abilities of the Adobe Creative Suite software.

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1   Australian Bureau of Statistics, Volume Year, Title, and page number

2   Age Newspaper, Volume Year, Title, and page number

3   Age Newspaper, Volume Year, Title, and page number

4. THE AUSTRALIAN CONTEXT

SWOT Analysis

Strengths

- Adobe Flash is a user-friendly software application.
- There is a sizeable existing knowledge base.
- Traditionally output file sizes are smaller and more manageable.

Weaknesses

- Stigma that Adobe Flash is not compatible with iOS devices.
- Adobe Flash can require additional external resources to utilise some features of mobile devices.
- The Fellow experienced a lack of willingness from industry experts to assist with the Fellowship.

Opportunities

- Could expand web-based business to produce mobile content more efficiently.
- Immediate training in the use of Adobe Creative Suite CS6 software.

Threats

- New emerging technologies like HTML5, CSS3 and JavaScript.

5. IDENTIFYING THE SKILLS AND KNOWLEDGE ENHANCEMENTS REQUIRED

There are examples of areas in the Australian Industry where there is a weakness in the innovative skills, knowledge, experience, policies, and/ or formal organisational structures to support the ongoing successful development and recognition of individuals and the particular sector.

The focus of all ISS Institute Fellowships is on applied research and investigation overseas, by Australians. The objective is to enable the required enhancement and improvement in the innovative skills not currently available in Australia, and the subsequent dissemination and sharing of those skills throughout the relevant Australian Industry, Education, Government bodies and the Community.

The areas of applied research for this Fellowship are therefore defined as follows:

1. Knowledge and experience in the use of Adobe Flash CS6 as a mobile applications development software platform is limited in Australia.

   » Developing advanced understanding of current production processes for mobile games using Adobe Flash CS6.

   » Understanding and applying of creating and accessing a database with ActionScript 3.0 in Adobe Flash CS6.

The outcome of undertaking training related to this deficiency, is to acquire the knowledge and experience to design and produce mobile applications with Adobe Flash CS6 for the iOS and Android products.

2. Knowledge and experience in the use of Adobe Dreamweaver CS6 to produce and publish mobile applications are limited in Australia.

   » Understand the role of Phone Gap in publishing mobile content from Adobe Dreamweaver CS6.

   » Develop expertise in the utilisation of Mobile query code in Adobe Dreamweaver.

   » Develop expertise in the techniques of mobile website design and publication from Adobe Dreamweaver.

The outcomes of research into this deficiency are to acquire the knowledge and experience to design and deploy mobile applications for iOS and Android devices utilising HTML 5 and CCS in conjunction with Adobe Dreamweaver CS6 and Phone Gap.

3. As already mentioned, a third area of research was planned, but could not be satisfied due to the lack of available overseas expertise being willing to discuss with the Fellow (despite pre-trip planning to include this area) to discuss this specific area. Knowledge and experience in the use of Adobe InDesign to produce and publish interactive mobile content is very limited in Australia, and apparently within Adobe as well, although it could well have been a due to a reticence to 'open up' to an outsider where competitive forces were in existence.

   » Investigate the relevant production processes of mobile applications from Adobe InDesign CS6.

The outcome was therefore a disappointment that despite a number of attempts to before arrival in San Francisco and whilst at the Adobe offices, no one was prepared to discuss this Skill Enhancement area with the Fellow.

6. THE INTERNATIONAL EXPERIENCE

Destination 1: Mobile + Web Development Conference (Devcon), San Francisco, California, USA

Specific Contact/s:

- Joseph R. Lewis, Operations Coordinator, Instructional Computing

- Daniel Parrillo,Instructor/Advisor, Vidality

A number of other people were met via attendance at their conference sessions, but Lewis and Parrillo were the main contacts made and fruitful discussions followed.

Objectives:

The aim of the Fellow attending the Mobile + Web Devcon, was to network with members of the local San Francisco Mobile Application development and the Web development community. In addition to networking with attendees and conference speakers, the Fellow also had the objective of gaining insight into which Adobe Software/ Technologies was in use by the local San Francisco Mobile Application development and the Web development community.

Outcomes:

The first outcome of attending this conference was the confirmation via discussion with several other attendees and a conference speaker that an incorrect perception exists that Adobe Flash was not a mobile application development program.

During discussions with Lewis, the utilisation of Adobe PhoneGap and HTML5 was highlighted. When Lewis and his team undertake a project, they begin with a Responsive Web Design technique. Adobe Dreamweaver, or in the near future Adobe Edge Reflow, can be used to achieve this. If the client for their specific project requires more functionality, Lewis' team can build the application in PhoneGap using HMTL5 technologies. This allows them to maintain a code base that everyone on the team can work with.

Day One: Pre-Conference Labs, Tuesday, January 29, 2013

9:00am

Speaker: Joseph R. Lewis, Chief Web Architect, Sandia National Laboratories

Topic: Taking Your Web Skills Mobile

Morris enjoyed Lewis' presentation. At Sandia National Laboratories Lewis' team uses Adobe Phone Gap at Sandia National Laboratories. Lewis' presentation highlighted the relevance of existing web development skills and the ability to apply those skills into mobile development.

6. THE INTERNATIONAL EXPERIENCE

1:00pm

Speaker: Raymond Camden, Developer Evangelist, Adobe

Topic: Designers can't do JavaScript! (An Introduction to JS)

Morris found Camden's presentation interesting. However the context of JavaScript went from simple to complex very quickly. Adobe Action Script is very similar in syntax and function ability as JavaScript. This is one reason why the skills learnt with Action Script transition easily to JavaScript.

Day Two: General Conference, Wednesday, January 30, 2013
8:45am

Speaker: Tom Conrad, Chief Technology Officer and EVP Product Manager, Pandora

Keynote: Pandora Case Study - Making the Transition from Web to Mobile Web

The Pandora case study was interesting, where the idea for Pandora was born and how it has evolved into what it has become today was insightful. However, although interesting and 'nice-to-know' information, Morris felt the actual presentation unfortunately did not directly relate to or add value to his Fellowship. He is happy to share his experiences and learnings with teachers of other more related Technology subjects.

9:30am

Speaker: Daniel Miessler, Principal Security Consultant, Hewlett-Packard

Topic: Keynote: Software Security Goes Mobile

Another interesting presentation however again the content was highly specialised and not directly related to the Fellowship.

10:30am

Speaker: Kellen Styler, Lead UX Technologist, Universal Mind

Case Study: The Jimi Hendrix Experience

This was a very interesting case study. The Jimi Hendrix Experience application App was very unique and featured a broad range of media related to Jimi Hendrix. Although not developed with Flash, Morris found the development process behind the app informative. It also highlighted similarities in current teaching practices.

11:15am

Speaker: Suzanne Alexandra, Founder and Creative Director, 'Android Evangelist'

Topic: Delight Me: Getting the Android UX Right

The major 'take away' information and ideas from this presentation was the concept of "design small and scale up". This means starting with the design of the mobile (smart phone) application then adding features and information as screen size increases (i.e. iPad, PC, Internet).

1:00pm

Speaker: Steve Derico, Founder - Bixby Applications

Topic: Open-Source Libraries every iOS Developer Must Know

Derico provided a long list of very useful open source libraries for utilisation in mobile application development. Some of these libraries may be integrated into applications Developed with Adobe Flash. Morris felt these libraries will most definitely benefit his colleagues in their work and teaching, perhaps even more than having direct relevance to his own Fellowship.

1:45pm

Speaker: Richard Clark, Head of Training, Kaazing University

Topic: Blueprints for Mobile Web Applications

Clark's presentation covered designing networked applications for batch updating, synchronisation and real-time collaboration. Also covered were techniques to evaluate different server approaches for these applications and how to evaluate the scalability options for each kind of application. Clark referred to development environments that included JSP/ JSF, Ruby-on-Rails & Node. These development languages were again outside the scope of this Fellowship.

2:30pm

Speaker: Josh Michaels, Founder - Jetson Creative

Topic: Succeeding in the App Store: Making Money

Michaels' approach to utilising the App Store can be summed up simply as follows: Publishing an app to the app store and selling for reasonable price creates a moderate return. Transforming the listing price to free to download creates a spike in end users. Michaels' attempted to capitalise on this spike by advertising his next app for sale on the App Store.

6. THE INTERNATIONAL EXPERIENCE

3:30pm

Speaker: Luke Harris, Head of Development, Rich Media, 4th Screen Advertising, an Opera Software Company

Topic: Rich Media Ads that Engage

Rich media traditional refers to advertising that incorporates multimedia elements, interactivity and or gaming to engage with the audience.

4:15pm

Speaker: Bradley Gross, Managing Partner, Law Office of Bradley Gross

Topic: I Don't Know... Is it Too Close? Navigating Mobile App Development Laws

The complex issue of copyright is ever present with any project. Gross's presentation was based around looking at a few cases where copyright was breached in the development of web/mobile content.

He highlighted the necessity of all mobile application developers ensuring they are fully aware of the local implications of copyright appropriate to their specific development.

Day Three: General Conference, Thursday, January 31, 2013

8:30am

Speaker: David M. Hogue, Ph.D., Vice President of Experience Design, (Fellow) Fluid, Inc.

Topic: Opening Keynote: Understanding Complexity, Designing for Simplicity

Hogue's presentation like most others was informative. Although the presentation did not relate directly to the Fellowship, the issue of complexity and how it relates to presented information and how a user interacts with that information on a website or on a mobile application (app).

With the now very common small screen format provided by modern mobile phones, the way an application or website is designed must consider the degree of complexity that can be suitable for presentation on such a device.

9:30am

Moderator: Lisa Oshima, Managing Consultant, Socialize Mobilize

Panel Topic: Where is Development Headed? The Opportunities in Pure Web, Native, and Cross Platform Development

Panelists:
- John Hammink, Mobile QA Lead, Firefox OS, Mozilla

- Ted Drake, Senior Accessibility SW Engineer, Intuit
- Jonathan Smiley, Partner/Design Lead, ZURB
- Melih Onvural, Technical Product Manager, TokBox

This open discussion did not cover anything that related to the Fellowship.

10:30am

Speaker: Garth Braithwaite, Retina Ready, Senior Experience Designer, AdobeXD

Braithwaite's presentation focused on the emerging technology of HiDPI displays. Introduced on the iPad, the technology is now available on Apple desktop displays and soon by other display brands.

Currently the majority of the web is not ready for display on the HiDPI displays. Braithwaite spoke about agnostic assets that could work on both HiDPI and DPI displays. This presentation forced the Fellow to reflect on his earlier experience with website design for desktop displays.

Mobile development is now beginning to move into the same transition as technology continues to advance rapidly designers and developers need to prepare their apps to function as intended on a range of devices with a range of resolutions.

11:15am

Speaker: Raymond Camden, Developer Evangelist, Adobe

Topic: Using Indexed Data Base for Storage

Camden is a very knowledgeable individual. His presentation on Indexed Data Base storage of large data was very technical. Again although this presentation was not directly related to the fellowship I think that is an area that could be investigated further both in relationship to mobile applications and gaming.

1:00pm

Speaker: Eric Bilange, Sr. Director of Engineering, Qualcomm Laboratories

Topic: HTML5 and Indoor Location: Scaling Contextual Apps for the Masses

Bilange's presentation on Qualcomm's Gimbal software was very interesting. It was not overly technical. It didn't discuss how the software could be integrated into a mobile application. It was highlighted that it was designed to work with Adobe PhoneGap. Gimble allows developers to use location and proximity information from a mobile device to provide the user relevant information. Bilange highlighted the app for the soon to be released Star Trek movie. Gimble made it possible for the user of the app to be prompted when they were close to a cinema screening the movie and allow users to gather rewards when they travel to particular geographical locations.

6. THE INTERNATIONAL EXPERIENCE

1:45am

Speaker: Peter Moskovits, Technology and Developer Evangelist, Kaazing Corporation

Topic: Breathing Life into Your Mobile Apps with Real-Time Collaboration

Moskovits' presentation related to the use of WebSockets. Again both technical presentation about web network information communication and not directly related to the Fellowship. I was interested in the benefits of the WebSocket technology. To simplify the process, it allows for large amounts of information to be passed across the internet much faster. This has potential to improve real-time interaction and collaboration over the Internet. The practical presentation featured a virtual 3D F1 race car model being driven by the presenter via the internet. The Fellow would be interested to see more research on this topic.

2:45pm

Speaker: Dee Sadler, UI Strategist/ Application Development

Topic: Sprint Android Application: A Case Study

Sadler's presentation of the Sprint Zone mobile app was an interesting look at all the factors that needed to be considered for the application development and its effectiveness at achieving the desired business outcome. This presentation did not feature any information directly for the Fellowship.

3:30pm

Speaker: Scott Jenson, Head of Design, Parlay Laboratories

Topic: Beyond Mobile: Making Sense of a PostPC World

Jenson's presentation was the final of the conference and was focused on the future of devices and apps. Jenson's presentation did not affect the outcomes of the Fellowship. Jenson talked a lot about the interconnect devices of today, such as mobile phones and televisions and the future track that the world of technology is likely to follow.

Destination 3: San Francisco, California, USA

Contact:
- Ethan Levy, Co-Founder, and Major Shareholder, Adobe Corporation

Objectives:

The Fellow's objective in meeting with Ethan Levy was to discuss the use of Adobe Software and Technology in mobile and web application development, with emphasis on games software. Of particular interest was Levy's view as a game producer and whether choice of software was a factor in developing a game.

Outcomes:

The Fellow gained insight into the strong history of Adobe Flash being utilised for the development of interactive games for the web.

The Fellow also confirmed that there are a growing number of alternative software programs that allow developers to produce mobile applications and content, including Game Studio Pro. Levy was very kind to extend to the Fellow the offer of utilising a game project developed with Adobe Flash by himself, for use in the Fellow's classroom activities.

The Fellow is looking forward to working with Levy in the future to introduce and utilise the project into his future classroom material.

Destination 4: Yeti Zen, San Francisco, California, USA

Contact:

- Japheth Dillman, Co-Founder & Chief Commercial Officer (CCO)

Objectives:

The Fellow's objective in visiting Yeti Zen was to liaise with those involved in the support of the San Francisco applications and games development industry. A secondary objective was to meet directly with those developers utilising Adobe Software.

Outcomes:

The business objective of Yeti Zen is to support the local game development industry and it appears to do this well. However, the experience of the Fellow was not so positive.

Although Morris was made to feel welcome, there was no additional assistance extended to the Fellow by this organisation.

The Fellow did meet a number of interesting people while in attendance at Yeti-Zen and enjoyed the various general discussions regarding the direction of mobile applications development; however none of the employees met with directly developed mobile games or applications with Adobe Flash and none could offer any advice regarding this specific area of mobile software development.

Destination 5: Adobe Creative Suite User Group Adobe Systems Incorporated, San Jose, CA

Contact/s:

- Sally Cox, Designer and Adobe expert, Indiana University Health
- Serge Jespers, Solutions Architect / Evangelist

Objectives:

The Fellow's objectives in attending the Adobe Creative Suite User Group meeting in San Jose were to:

1. Revisit the Adobe Edge tools demonstration
2. Network with Adobe staff and other mobile content developers.

6. THE INTERNATIONAL EXPERIENCE

Outcomes:

The presentation of Adobe Edge tools by Jespers focused on Adobe Edge Animate.

The Fellow did establish contact with Jespers directly; however, although that contact was friendly and general discussion occurred about Mobile applications, it did not extend to any additional communication or information relating to the specific area of this Fellowship.

There were no mobile developers present at the meeting.

Destination 6: Academy X, Custom mobile development training with Adobe Flash

Contact:

- Rob Huddleston, Adjunct Faculty, The Art Institute of California, A College of Argosy University, San Francisco, CA

Objectives:

The Fellow's objectives in requesting and attending the custom training at Academy X at Argosy University in San Francisco was to re-confirm self-taught skills and to obtain further skills and knowledge to create and manipulate a database via Adobe Flash CS6 on iOS and Android mobile devices. This would lead to a better understanding of all aspects of the use of Adobe Flash software under iOS, as well as increasing the Fellow's teaching ability.

Outcomes:

The training was excellent; Huddleston was a very good trainer and demonstrated expert knowledge of his material.

As a result of this training the Fellow realised the necessity for additional personal training in Database development and Website technology. At this stage of the Fellowship however, there was no additional timing or funding available for the Fellow to undertake training.

Morris now intends to undertake this required training in the future at the first available opportunity.

The Fellow undertook training at Academy X, under the guidance of Rob Huddleston. The training was derived from the book, Professional Flash Mobile Development, Creating Android and iPhone Applications by Richard Wagner.

Due to the ease of publishing applications to the Android platform, the training was conducted with an android smart phone for testing. As Morris has been a registered Apple developer for several years, after each days lesson was completed, Morris could publish the same files developed in class on his own iOS device.

The training covered the following areas of development:

Day 1 - Multitouch API

Morris followed Huddleston instructions to implement common mobile device touch events such as touch, swipe, rotate and pinch. The exercises for these events focused on a photo library.

Day 2 - Detecting Motion with Accelerometer

To implement motion detection the exercises focused on moving a circle around the mobile device screen.

Implementing Auto Orientation

One of the basic functionalities that a Mobile Device User will expect when using a mobile application is for the screen of their device to correctly orient to the user (i.e. portrait to landscape and vice versa) when the device is physically rotated in the user's hands. This training unit focused on the Adobe Flash Action Script 3.0 to apply the functionality of Auto Orientation of the display on the user's mobile device.

GeoLocation API

Most mobile devices feature a GPS location system. This training unit demonstrated how to access and display the GPS location date of the device in an Adobe Flash Application via Action Script 3.0

Day 3

Harrison and Morris worked on a custom exercise taking elements from the Detecting Motion with Accelerometer exercise from day two to create a custom game, that focused on getting a ball graphic into a hole and keeping score. The Fellow hopes to develop this into an introductory exercise for mobile game development with Adobe Flash.

Destination 7: Yeti Zen, San Francisco, California, USA

Contact:
- Giacomo Balli, OS Entrepreneur & Mentor, BigBalli, San Francisco, California, USA

Objectives:

The objective of meeting with Giacomo Balli while in San Francisco was to discuss the use of Adobe PhoneGap in the development of mobile content and applications.

Outcomes:

Giacomo is a very knowledgeable person in the area of mobile content and application development. The Fellow's discussion with Giacomo confirmed that the use of Adobe PhoneGap was a valid software choice for the development of mobile content and applications.

Destination 8: San Francisco, California, USA

Contact:
- Jono Spiro, Software Engineer, Artillery Games, Inc., San Francisco, California, USA

Objectives:

The Fellow's objective of meeting with Spiro while in San Francisco was to discuss the use of Adobe Flash as a mobile content and application development software platform.

6. THE INTERNATIONAL EXPERIENCE

Outcomes:

Spiro is a very experienced software developer and the Fellow was thankful to discuss the aims of the Fellowship with him. Spiro recently moved into the emerging area of Web game and application development with HTML5 and JavaScript.

This highlights one of the similarities with Adobe Flash ActionScript 3.0 programming language and other languages like JavaScript. Spiro's move away Adobe flash was not due to any inability of Adobe Flash to achieve a given outcome, but was more specifically based on personal development and challenge.

Destination 9: San Francisco, California, USA

Contact:

- Kevin Ruse, Adobe Certified Instructor,

Objectives:

The objective of meeting with Ruse while in San Francisco was to discuss the use of Adobe system's software in the development of mobile content and applications and the range of emerging alternative software available.

Outcomes:

The outcomes of meeting with Ruse were positive. During the course of the conversation, the Adobe White paper on Adobe Flash was discussed. This White paper confirms Adobe's support of Adobe Flash into the future ( ).

Ruse and Morris also discussed the number of emerging software development platforms including HTML 5. Ruse was very kind to extend the offer of future collaboration to the Fellow.

Destination 10: Adobe San Francisco office

Contact/s:

- Tomas Krcha, Gaming Evangelist, Adobe, San Francisco, California, USA

Objectives:

The Fellow's objectives for meeting with Krcha at Adobe's San Francisco office was to gather first-hand experience from front line Adobe staff who are focused on Adobe Flash and other technology for mobile applications gaming.

The Fellow also hoped to discuss other emerging software available from Adobe for mobile content development.

Outcomes:

The Fellow's meeting with Krcha was held in the cafeteria of the Adobe San Francisco office. The Fellow was only offered a 30-minute meeting, despite previous communication. Morris did discuss Adobe

Flash as a mobile content development software platform. Krcha highlighted a number of additional applications developed in conjunction with Adobe and also independently. These included 'Starling & Feathers'.

Krcha was kind enough to extend to the Fellow the gift of a training DVD and book. The other software mentioned during the meeting was the Citrus game engine. The Fellow was (and still is) very interested to investigate these software applications further but currently feels that the development of a working Adobe Flash only mobile application prototype is the best first step forward.

Morris had hoped that Adobe would have extended a greater interest in the Fellowship, but it seemed that Adobe was not committed to any assistance beyond this brief meeting.

The Fellow recognised and unfortunately has had to accept that Adobe is a large software development corporation operating in a very competitive market and as such has considerable privacy and security protocols that must be followed.

The Fellow concluded his meeting with Tomas Krcha and Adobe feeling less than satisfied.

Destination 11: Lanica Corporation

Contact:

• Bruno Fonzi, Co-Founder and VP of Products, Lanica Corporation, San Francisco, California, USA

Objectives:

The objective of the Fellow meeting with Bruno Fonzi were to discuss the prior and current experience of Fonzi and his company, Lanica, with Adobe Flash.

Outcomes:

The Fellow was grateful that Fonzi could make the time to meet with him before the he left San Francisco. Fonzi was previously employed at Adobe systems and was involved with Adobe's mobile development software architecture.

His company, Lanica, has developed their own mobile application and game engine, called Platino. Fonzi commented in a similar vein to many other industry members, about the obscure future Adobe Flash faces, due to acceptance across the mobile application and games industry.

Bruno along with other industry members, have all cited other software solutions to mobile development.

7. KNOWLEDGE TRANSFER: APPLYING THE OUTCOMES

The Adobe Creative suit CS6 includes a variety of software applications including Adobe Flash, that make it possible for designers to easily implement their designs and ideas into the mobile application space.

The outcomes of the Fellowship research has made it possible for Morris to now confidently instruct others on the processes of mobile content development for both iOS and Android.

The Fellow has already implemented part of his research learning acquired during his Fellowship into his classroom programs and will continue to do so progressively as the opportunity arises. As part of the lesson plan for this competency, it will now be possible for the Fellow to demonstrate to students how to prepare and deploy an interactive animation to a mobile device.

The skills and knowledge acquired by the Fellow can also be incorporated into the delivery of ICAGAM406A; Create Visual Design Components for Interactive Games, part of the ICA40911 Cert IV in Digital and Interactive Games. ICAPRG418A Apply Intermediate programming Skills in Another Language, part of the CICA50911 Diploma in Digital Media Technologies, could also utilise the skills and outcomes developed by the Fellow of the Fellowship.

8. RECOMMENDATIONS

Government – Federal, State, Local

The Fellow will identify opportunities to provide input into the discussions on the development of an Australian standard or the adoption of Adobe Flash programs in teaching programs.

Industry

The Fellow recommends that the Mobile development industry not turn away from Adobe Flash as a development platform. The experience of the Fellow during his Fellowship is that the industry is rushing toward new emerging technologies and avoiding updates that are available in software like Flash, software that is still widely used in many design industries.

The Fellow is however, not suggesting that emerging technology should be ignored: embracing it is a very important step in the progression of technology.

Professional Associations

Professional Associates (e.g. Computer Society, Professional Interest Groups, Forums) should all be more informed about the usability of Adobe Flash across a range of mobile applications.

Education and Training – University, TAFE, Schools

The Fellow will liaise with relevant Industry groups to develop standards for nationally accredited courses. The Fellow is available to work with other TAFE institutes to develop and implement curriculum and teaching resource materials.

If Adobe Creative suit CS6 is part of an institution's software catalogue the Fellow recommends that the institute consider engaging students in mobile development with software available as part of Creative suit C6.

The Fellow currently delivers competency ICADMT402A; Produce interactive animation as part of the ICA40911; Cert IV in Digital and Interactive Games & ICA40811; Certificate IV in Digital Media Technologies, and has incorporated relevant research findings into these units.

Further Skills Enhancement

Skill and knowledge deficiencies (and general confusion and lack of awareness) remains throughout the Australian mobile applications area regarding the relevance and use of Adobe Flash in the Mobile development world across international markets.

These areas require future skill and knowledge enhancement that could be further addressed by the Fellow in conjunction with ISS Institute through the provision of further Fellowship opportunities in partnership with Australian development organisations.

The Fellow has already delivered dissemination sessions to colleagues at Swinburne University of Technology, and is prepared to schedule similar sessions to other interested groups at an appropriate and convenient time in the future.

He is also available to meet with the other ISS Institute Fellows (who have researched comparable areas of Interactive Systems, Business applications and/or Games development).

9. REFERENCES

Reference 1:

http://www.taxpayers.org.au/wp/wp-content/uploads/2012/04/ATABusinessPlan.pdf

Copy this link into your browser for information on numerous links to various examples of Business Plan documentation.

Reference 2 & 3:

http://theage.com.au/digital-life/games/all-funds-and-games-as-arts-gets-20m-shot-in-arm-20121114-29cq2.html

Official support for the games Industry began in 2012, and is exampled by this article outlining a three-year funding program to continue the development of Interactive Games in Australia.

''Australian studios are recognised internationally for their skill and originality in developing interactive games played all over the world, but the local industry is coming under increased pressure in the midst of a major market shift,'' Mr Crean told the Screen Producers Association of Australia conference at Docklands on Thursday. ''This fund will assist the sector to reclaim its competitive advantage and support the development of games in Australia, investing in the intellectual property of our creative businesses to give them a stronger position internationally.''

Reference 4:

http://wwwimages.adobe.com/www.adobe.com/content/dam/Adobe/en/devnet/flashplatform/whitepapers/flash-runtimes-roadmap.pdf

This document provides an overview of the Adobe® Flash® runtimes and a roadmap for their development. The primary goal is to provide guidance as well as insight into Adobe's current thinking and plans around core Flash functionality contained within Adobe Flash Player and Adobe® AIR® over a time frame of the next year.

Note: This document is current as of the publication date and contains information that is subject to change. The further out the time frame being discussed, the more uncertain the specifics of the roadmap are. If there are significant changes to plans around items discussed within the white paper, the document will be updated in a timely manner. The latest version of this document can always be found at adobe.com/go/flashplayer_roadmap.

General References:

Included here to indicate the growth and acceptance of Games development in Australia. While not directly relevant to this fellowship research, they are included as examples of the importance of games Development to the Australian Industry.

https://www.google.com.au/search?client=safari&rls=en&q=computer+games+association+australia&ie=UTF-8&oe=UTF-8&gfe_rd=cr&ei=vE0WU8LWGMeN8QfTqYGICA

Interactive Games & Entertainment Association (IGEA) is an independent industry association representing the business and public policy interests of Australian and New Zealand companies in the computer and video game industry. Its members publish, market, develop and/or distribute interactive games, entertainment content and related hardware. IGEA is administered by a Board of Directors comprising senior executives from interactive games and entertainment companies.

http://australia.gov.au/about-australia/australian-story/digital-games-industry

9. REFERENCES

In recent years Australian developers have notched up a host of successes ranging from the innovation of Auran's epic world-beating strategy game Dark Reign to Blue Tongue's high-profile Jurassic Park. This has led to the Australian games industry earning a reputation for quality in a vast worldwide market hungry for new content.

The high growth rate in the worldwide games market means there are many opportunities for the local industry to keep growing and developing. But to stay on top of the game in this notoriously fast-moving industry, local companies need to be lean, flexible and innovative. The changing nature of games means that local developers are facing some big challenges, but also some unique possibilities to move into new and exciting types of computer games. In fact, new and exciting career paths are already opening up for Australian game enthusiasts with the right mix of skills.