

# Cognate and Contrast: An investigation into Chinese Television production in 2013



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2013 Higher Education and Skills Group (formerly Skills Victoria)  
Overseas Fellowship

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# i. Executive Summary

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The focus of the fellowship was to prove or dispel common understanding of the current Chinese television facilities and environment. Prior to these investigations, the common perception from the western world looking inwards at Chinese television station technology, was one of great magnitude and technological advancement. The purpose of the fellowship investigation was to retrieve information regarding this technology, with a view to implementation of advantageous techniques within the local Australian industry.

Across the spectrum of Chinese Television broadcast exist several contradictions in that investment in technology was extraordinary in its proportion; however, careers in the television were considered to be a lowly choice amongst young people considering their career.

Many simple aspects of refining television production and delivery are currently being overlooked, such as use of widescreen outputs and correct aspect ratio. The proportion of HD delivery is also hindered by the lack of technological take up at the domestic level, which highlights socio economic differences between China and Australia.

Government involvement remains high through the censorship department, although the freer market was leading to popular world franchises becoming prevalent such as 'Chinese Idol'.

Despite the consensus that China is advancing into tapeless production, there are many 'lag effects' currently at play, as the new systems invested in continue to be linked during a phase of extreme media investment.

Some of the barriers involved are delays in the roll out of broadband access due to the sheer size of the country. This is something not unfamiliar to Australia, possibly even more so, considering the arid proportions of our land, coupled with a relatively small population.

Chinese television remains the leader in technological stockpiling, however, European, American and even Australian television workflows and practices have much to offer in exploiting the most modern genres of programming. In fact, the Chinese market tends to be adopting these foreign franchises and hence practices where suited. Not only does this emulation involve programming, but also technology, with several Chinese manufacturers duplicating recent advances in technology worldwide.

# Table of Contents

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<b>i</b>	<b>ii. Abbreviations/Acronyms</b>
<b>ii</b>	<b>iii. Definitions</b>
<b>1</b>	<b>1. Acknowledgements</b>
<b>3</b>	<b>2. About the Fellows</b>
<b>5</b>	<b>3. Aims of the Fellowship Program</b>
<b>6</b>	<b>4. The Australian Context</b>
<b>7</b>	<b>5. Identifying the Skills and Knowledge Enhancements Required</b>
<b>8</b>	<b>6. The International Experience</b>
8	Hong Kong - Sha Tin Racing TV coverage, Hong Kong Jockey Club
12	Shanghai - Shanghai Media Group SMG Radio
16	Shanghai - SMG Television Dragon TV
21	SMG Television – Dragon TV
29	He Fei via Nanjing
32	Nanjing - Jiangsu TV
39	Beijing – EVS Beijing
40	Beijing – VIZrt
40	Beijing – CCTV
<b>47</b>	<b>7. Knowledge Transfer: Applying the Outcomes</b>
<b>48</b>	<b>8. Recommendations</b>

# ii. Abbreviations/Acronyms

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<b>2D</b>	Two dimensional broadcast system
<b>3D</b>	three dimensional broadcast system
<b>AFC</b>	Asian Football Cup
<b>AVID</b>	American company specialising in video and audio production technology; specifically, digital non-linear editing (NLE) systems
<b>CCU</b>	Camera Control Unit
<b>EVS</b>	Ecriture Video Simulation
<b>HD</b>	High Definition
<b>HKJC</b>	Hong Kong Jockey Club
<b>NLE</b>	Non-linear Editing
<b>SD</b>	Standard Definition
<b>SMG</b>	Shanghai Media Group
<b>TAFE</b>	Technical and Further Education
<b>TRP</b>	Thoroughbred Racing Production
<b>TVN</b>	Thoroughbred Vision Network
<b>VIZ</b>	Visualisation
<b>VIZrt</b>	Real-time Visualisation

# iii. Definitions

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**EVS**

A hard disc driven vision, audio and keying record and playback device

**HD**

Screen size 1920 pixels wide and 1080 pixels high

**ORAD**

Three Dimensional real-time Broadcast Graphics

**SD**

Screen size 720 pixels wide and 576 pixels high

**Pixels**

Square units of colour

# 1. Acknowledgements

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Chris Gospel and Nick Lovett would like to thank the following individuals and organisations who gave generously of their time and their expertise to assist, advise and guide them throughout the Fellowship program.

## **Awarding Body – International Specialised Skills Institute (ISS Institute)**

The International Specialised Skills Institute Inc is an independent, national organisation that for over two decades has worked with Australian governments, industry and education institutions to enable individuals to gain enhanced skills and experience in traditional trades, professions and leading-edge technologies.

At the heart of the ISS Institute are our 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:

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

Over 200 Australians have received Fellowships, across many industry sectors. In addition, recognised experts from overseas conduct training activities and events. To date, 22 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, but also multiple and higher level skills and qualifications. Deepening skills 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 across a range of industries and occupations.

In this context, the ISS Institute works with Fellows, industry and government to identify specific skills 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 practice, 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>.

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## **1. Acknowledgements**

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In particular, the Fellows wish to thank Sir James Gobbo SC CVO, Bella Irlicht AM (CEO), Ken Greenhill and Paul Sumner of ISS Institute for their assistance and commitment to this research project.

### **Fellowship Sponsor**

The Victorian Government, Higher Education and Skills Group (HESG) formerly Skills Victoria, is responsible for the administration and the 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. The Fellow would like to thank them for providing funding support for this Fellowship.

### **Supporters**

- » Jason Tan, Hong Kong Jockey Club (HKJC)

### **Employer Support**

- » Northern Metropolitan Institute of TAFE (NMIT)
- » Liam Freeman
- » Peter Lamburd
- » Andrew Gannon
- » Helena Williams

### **Organisations**

- » Northern Metropolitan Institute of TAFE (NMIT)
- » Royal Melbourne Institute of Technology (RMIT)
- » McGuire Media/FOX Sports
- » Hsquared Media
- » Gearhouse
- » Network Ten
- » WINtv

### **Industry**

- » Harry Hart, Director, H2TV
- » Barry Shaw, Gear House
- » Richard Edlin, Editline
- » Manda Hatter, Network Ten
- » Mike Lewis, Network Ten
- » Daniel Sorrell, Network Ten



# 2. About the Fellows

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## Christopher Gospel

After graduating from Canterbury Christ Church University in the United Kingdom, with a Bachelor of Arts (Honours) in Radio, Film and Television, Christopher was employed as a Technical Operator for Lehman TV in London. He was directly involved in the technical facilitation of live production for Bloomberg, CNBC, CNN, Reuters.

Christopher later became the TV co-ordinator at Peterborough College. During this time he completed a Masters (module) in Digital Television production at the University of London.

Christopher later relocated to Australia and became the Technical Manager and Educator for Northern Melbourne Institute of TAFE in their High Definition television studio facility.

Simultaneously Christopher established a production house providing services across the fields of AVID editing, camera and EVS operation.

Christopher is currently employed by Videocraft Australia as a AVID-EVS IT systems specialist. He has been involved in the installation and ongoing management of live production units, for major events such as Formula 1 (Network 10), Commonwealth Games (Network 10), Wentworth (Fox 8) and The Recruit (Fox 8).

The fellowship was specifically aimed at increasing Christopher's knowledge in teaching the next generation of TV students, however it has further broadened to most significantly filter into the Australian industry directly.

- » Technical Operator, Lehman TV, London, UK 2001-2004
- » TV Coordinator, Peterborough Regional College, Peterborough, UK 2004-2008
- » Screen & Media Educator, NMIT, 2008-2013
- » Freelance Editor and EVS Operator, 2008-Present
- » Avid/EVS IT Engineer, Videocraft, 2014

### Qualifications / Awards:

- » BA (Hons) in Radio, Film and Television with Art (2.1),
- » Canterbury Christ Church University, UK, 2001
- » Post-Graduate Certificate in Post-Compulsory Education.
- » University of Northampton, UK, 2004
- » MA (Module) in Digital Video Production in Education (Grade A).
- » University of London, UK, 2005.

## **2. About the Fellows**

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### **Nick Lovett**

After completing a Bachelor of Arts at Monash, Nick commenced work in the advertising industry with Show Ads. Quantel Paintbox, a graphics system for print and television, provided a bridge into the television industry, as Nick moved into a graphics department role for Network 10.

Nick progressed to a supervisory role across 12 production departments at Network 10 and simultaneously became the coordinator of the newly established Network Ten Broadcast Traineeship. This fired an interest in TV education and upon leaving Network Ten, Nick combined sessional teaching at Royal Melbourne Institute of TAFE, with building a new studio for H2 Television in Richmond. At completion, Nick moved into the position as Coordinator of the TV Unit at Northern Melbourne Institute of TAFE, across Cert IV, Diploma and Advanced Diploma courses.

Most recently Nick has been employed at McGuire Media/JamTV as the Operations Manager and is now responsible for programs such as: The Recruit, Get On, Juventus vs A-League All Stars soccer (Channel 7 mate), Asian Football Cup (Fox Sport), WTC tennis (Fox Sport), Stawell Gift Athletics (Fox Sports), The Club (Fox Sport), The Hangar (Fox Sport), Talking Footy (Fox Sport), SANFL (Channel 7 Adelaide) and managing corporate accounts.

When the fellowship was initiated, it was anticipated that new skills and knowledge could be regularly transferred to generations of students and this did in fact occur, however it has progressed to affecting many aspects of current involvement in industry production.

- » Show Ads on Paintbox, 1992-1995
- » Graphics Paintbox, Channel 10, 1995-2005
- » Production Supervisor, Channel 10, 2005-2011
- » Production supervisor, H2TV, 2011-2012
- » Sessional Teacher, RMIT, 2012
- » Program Co-ordinator, NMIT, 2012-2013
- » Operations Manager, McGuire Media/JamTV, 2014

#### **Qualifications / Awards:**

- » Jenson Scholarship recipient, HSC Wesley College, 1986
- » Bachelor of Arts, Monash University, Melbourne, 1991
- » Certificate IV Training & Assessment, 2012
- » Diploma VET Practices, 2013.

# 3. Aims of the Fellowship Program

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## Introduction

There were many difficulties in arranging visits and making contacts, as any efforts were widely met with scepticism and suspicion from Chinese agencies. For many industry personnel, the response was guarded fearing it could only open themselves up to trouble. The overwhelming sensation was that these were far from being open markets, despite the best attempts to stress that they were.

## Objectives

The main objective was to prove or dispel the popular themes of Chinese Television advancement and development. This would assist the Australian television industry by establishing whether certain technologies had a future at all. In fact during the fellowship, the BBC in the United Kingdom announced that they were no longer pursuing 3D TV production due to the massive infrastructure costs, facility commitments and a lack of impact in attracting public enthusiasm. The Fellows also sought to understand specifically, the roll out of broadband fibre delivery in Native High Definition (HD), wide screen 16x9, use of tapeless technologies and workflows. This would help guide the pursuit of future advancement in the Australian industry equivalents, all of which are still current. A further discovery during the fellowship, was that Chinese development of 4K imaging (3840 x 2160 pixel ratio), was at a similar stage to Australian interest and pursuit.

The main benefits to be gained from the Fellowship were to gain:

- Greater understanding of current transmission methods and standards
- Knowledge of three dimensional (3D) TV technology and its application
- Knowledge of high-speed photography and it's integration with Electronic playback device (EVS) currently at NMIT
- Deeper understanding of Ecriture Video Simulation (EVS - hard disc record and playback device) systems and workflows, with a particular emphasis on digital tapeless workflow
- Increased skills base across the education field.

# 4. The Australian Context

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As Australia is a relatively small nation population-wise, investment in television broadcast infrastructure is often not on a scale that can, in the short term at least, justify the more complex and expensive modes of production. This includes 3D technology, native HD vision, EVS and tapeless systems, Visualization (in) Real Time (VIZrt) Graphics system networks and Virtual Sets.

The strengths of the Australian TV industry are highly skilled and specialised practitioners. There is a strong work ethic and a high degree of creative input at several levels of production.

Weaknesses include high staffing costs and due to the high dollar conversion rate during the fellowship period, many forms of international technology were expensive to the local industry.

The strongest opportunity exists in exporting intellectual property to China. Since the fellowship period, there have been many instances where colleagues have indeed been drawn into the local Chinese market, to participate in teaching and raising the local level of knowledge.

There doesn't appear to be any negative impact evident for the local industry in Australia through consultation with Chinese participants. To the contrary, Nick and Chris have been aware of several attempts to bridge any existing gaps through joint initiative program creation and stronger links between the Chinese and Australian television industries.

However, proliferation means that in the near future these systems will become more accessible and they will become more commonplace in all existing television production facilities. As TV educators, increased knowledge in these areas gives greater direction for students who will filter into driving these systems. Furthermore presentations to industry groups will assist in smoothing this transition and implementation.

# 5. Identifying the Skills and Knowledge Enhancements Required

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There are examples of areas in Australian industries and activities where there are weaknesses in skills, knowledge, experience, innovation, 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 main objective is to enable enhancement and improvement in skills and practice not currently available or implemented in Australia and the subsequent dissemination and sharing of those skills and recommendations throughout the relevant Australian industry, education, government bodies and the community.

The skill enhancement areas to be addressed through this Fellowship were:

## **Enhancement Area 1: Knowledge of 3D television technologies.**

**Aim:** To develop a thorough understanding of new 3D television technologies such as its capture, tapeless digital 3D workflow (especially through an EVS infrastructure) and the output process to transmission streams.

**Benefit:** This will enable the implementation of industry standard workflows such as ingest management, storage and gateway and play out management, with a specific focus upon the emergence and development of 3D technology.

## **Enhancement Area 2: Knowledge of Television distribution networks including handheld devices.**

**Aim:** To establish a fundamental knowledge base of innovative mobile television and multimedia broadcast standards recently developed and used by China.

**Benefit:** This will provide opportunity to identify and implement current best practice in terms of the delivery of television and video through mobile technology – an area that Australia has until now not considered a priority.

## **Enhancement area 3: Knowledge of Chinese TV Education environment and landscape.**

**Aim:** To initiate industry contacts and to set up training partnerships with various national Chinese Television Networks and Stations.

**Benefit:** The introduction of new Chinese learners to the Australian TAFE environment not only would provide a financial incentive but also a cultural one.

# 6. The International Experience

## Hong Kong - Sha Tin Racing TV coverage, Hong Kong Jockey Club

### Background:

Following months of arranging contact and details, Gospel and Lovett met with HKJC Producer Jason Tan, who provided access to their 22 camera coverage of the races that take place on Saturdays, Sundays and public holidays at Sha Tin Racecourse, approximately 18.5 kilometres from Hong Kong island.



*Racecourse from Members area displaying patronage*

The HKJC also have a racetrack on the island from where TV resources are shared. In fact this was a deliberate situation given the fears that surround virus breakouts in the warm Asian climates. In this way, if either centre is isolated, the industry can continue independent of its other half, whilst maintaining TV coverage. Furthermore, this redundancy also allows for phantom meetings to take place at the alternate sites, catering to two audiences at a time and increasing the sport's viability, whilst keeping revenue streams maximised. This was of great interest in terms of Australian trends, as test cases have started to take place across the Australian Racing coverage landscape. (i.e. It is now mooted that a phantom meeting be held at Caulfield Racecourse on Melbourne Cup Day.)



*Racecourse Mounting Yard 1 displaying scale and dimension of facilities*



*Mounting yard monitor displays*

## **6. The International Experience**

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An added contingency exists via a back-up fibre connection to Happy Valley racecourse.

With unprecedented access, the full sport coverage was an ideal way to witness differences between Chinese operation and Australian procedures in television production. The most noticeable differences resided in the lay out and activities of the control room and the workflows taking place. This was largely due to the services being provided across several markets, divided across languages and different gambling services. Most significant was the service being provided to the Chinese mainland without odds, as the Chinese Government still has a ban in place on horse race gambling. It was generally accepted though, that this would not prevent interested parties wagering in some form or another. Chinese culture is synonymous with gambling and despite several attempts; horse racing has not yet been given an approved model to function on the mainland.

The further variations in services were the division between Cantonese, Mandarin and English.

In the depths of the complex, far removed from the Control Room, was another suite existing solely for the purpose of Camera Control Units (CCU). These are the units that provide colour balance, focus and tone balancing and control. In Australia, one operator would be responsible for this activity in the role of Technical Director, because the aim is to make all cameras uniform across one group of settings. However, at Sha Tin one operator was provided for each CCU box. Twenty-two cameras had 22 CCUs. This then became the first instance in China, where the tendency to utilise 'man power' over a concentration of duties was witnessed.

A further difference in staffing trends was the use of contracted staff across the vast majority of roles. Between the two racing locations for race days, two preparation days and a preview show, it was explained that it was deemed more practical to have trained dedicated staff available for regular



*Control Room 1 Graphics & Slow motion area*



## 6. The International Experience

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operation. In Australia, it is far more common for these staff to be freelance or casual. Generally this difference would be based on a model of variation and more specific knowledge built in the operation of the equipment. It is also possible that with smaller populations and hugely varied sport coverages, freelance staff have to be more agile. Furthermore, in Australia the race clubs do not control the coverage of their product independently. Instead this is done through a subsidiary company called Thoroughbred Vision (TVN), which in turn subcontract Thoroughbred Racing Productions (TRP), that provide all broadcast services to a set standard across the country.

### **HKJC Technology:**

Gospel and Lovett found that contrary to much information sought pre-trip concerning the percentage of Chinese TV that remained in Standard Definition and in a 4x3 aspect (720x576 pixels), there was actually less take up of the world wide trends toward High Definition and 16x9 (1920x1080 pixels) Particularly in Hong Kong, this does not appear to be a focus for the current government strategies. The explanation given for this was that the purchase of 16x9 HD sets in regional areas was not widespread or popular in weighing up the expense.



*Control Room 2 Director area*

Operationally, the Control Room is extremely quiet compared to Australian situations which are far more raucous. It was explained that this was because, as a sport, it was highly organised from the club's perspective and could be timed to the second in terms of replays and presentations. There was very little room for generating the 'stories' that are heavily pursued in the Australian equivalent.

From a technical aspect, the Control Room is very efficient and provides three times Ecriture Video Simulation (EVS). Each is dedicated to recording different angles of the race for specific replay. One



## **6. The International Experience**

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EVS is dedicated to a Super Slow Motion record, which is the first item replayed after the race has passed through live, followed by a complete race replay. In addition, the use of IP Director was of much interest given the scale of production, which did not necessarily warrant the use of such high-end systems. Australia is only now installing and incorporating this software/hardware. It is a centralised control system for more efficient use of the EVS systems, as it is able to distribute vision and audio to different suites, where it is processed (edited) and returned to the Control Room.

Two Directors control this process, as opposed to an equivalent Australian operation, which would be centred on the operation of one Director and a Director's Assistant, who has a distinctly different role. In this instance, the second Director controls the trackside cut, whilst the other focuses on the broadcast output. The trackside cut was however, integrated back into the broadcast, similar to the Formula One car racing in Melbourne, Australia.

Another two Directors reside behind these positions, each responsible for a different market, being a mainland China feed and another for the International feed in English.

It was surprising that tape decks were still in use, rather than a tapeless workflow.

One area that appeared unusual in terms of modern operation, was the use of an aged character generating system called 'Inscriber' (Harris) to supplement one of the most modern graphics systems available today in VIZrt. Whilst use of VIZrt systems is heavily embedded into the presentation model, mounting yard selections from the commentators is added at the very last moment by keying over an animated super bar. When asked about this, operators indicated that the complexity of VIZrt had been a frustration to producers and managers. The cost of providing a suitably trained VIZrt Artist had outweighed the benefits and so a simple measure had been to revert to old systems rather than pay for new scenes to be created. When questioned further, rather than train staff there was a push to look at purchasing a further more simple system.

## 6. The International Experience

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### Shanghai - Shanghai Media Group SMG Radio



Shanghai Old (1950) v Current (2013)

## 6. The International Experience

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Shanghai TV Tower



## 6. The International Experience

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*SMG Radio Foyer*



*SMG Radio Pop Rock DJ*

Whilst radio is not always associated or linked directly with television, the level of investment and patronage can often be a useful barometer of the wider media environment. Significantly, in Shanghai, that is the structure of the Shanghai Media Group (SMG) network, to incorporate radio and television within the same organisation and hence making it easier to control all forms of mass media.



*SMG Radio Classical Music DJ*

## 6. The International Experience

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For the first time the veil of government, national and industry security became evident; however, access was eventually provided to the Control Room, Server Room, Traffic department and Studios after some gift exchanges and a more extensive description of the Fellowship visit's purpose.

Reflecting Australia's industry, radio receives less investment, similarly on the basis of not being directly in people's view, but also left behind in terms of technical elements and development. The end product is predominantly analogue broadcasts. The Control Room and Presentation suites are populated with archaic equipment compared to its 'richer cousin' television.



*SMG Radio Broadcast*



*SMG Radio Most modern suite*

## 6. The International Experience

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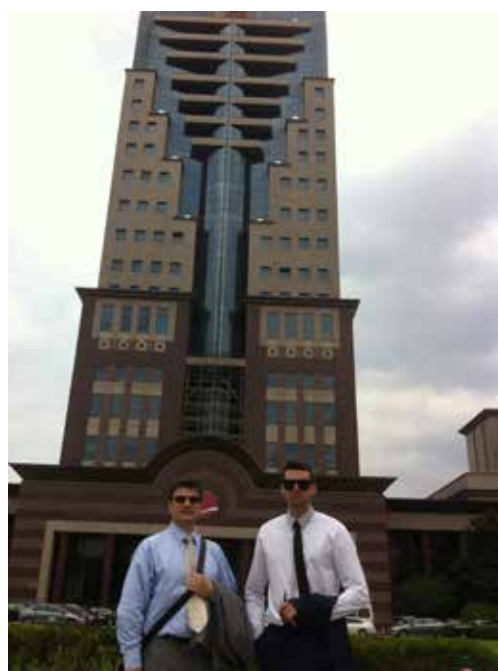
### Shanghai - SMG Television Dragon TV



*SMG TV Couch set*

As with all media in China, however, radio does receive significant attention in terms of censorship. The censors maintain a presence in each organisation. Following the visit to SMG Radio as a test case, it was realised that there was nothing to fear in allowing access to this Fellowship visit and hence doors began to open. A visit to Dragon TV was then arranged and this proved to be priceless. Built on an American design, the studios cater to several Finance and News, update and Sport services.

The studio's open design allows for large booms/jibs, also known in Australia as a 'cherry picker'. Mounted to these are SONY HDC 1500 cameras with auto script mounts, which are operated by a single staff member. In addition, an Israeli virtual graphics system called ORAD interacts with the studio space, providing topical support. In the demonstration provided, soccer grounds, aircraft carriers and Chinese lanterns were super imposed into the foreground and the product of that was then fed back into the large monitor walls behind the talent.



*SMG TV monitor set*



## 6. The International Experience

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SMG TV Monitor Wall



SMG TV Couch set with monitor wall

## 6. The International Experience

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The control room utilises a Kayak HD Digital Production Switcher.



SMG TV Kayak Vision mixer



SMG TV Control Room



## 6. The International Experience

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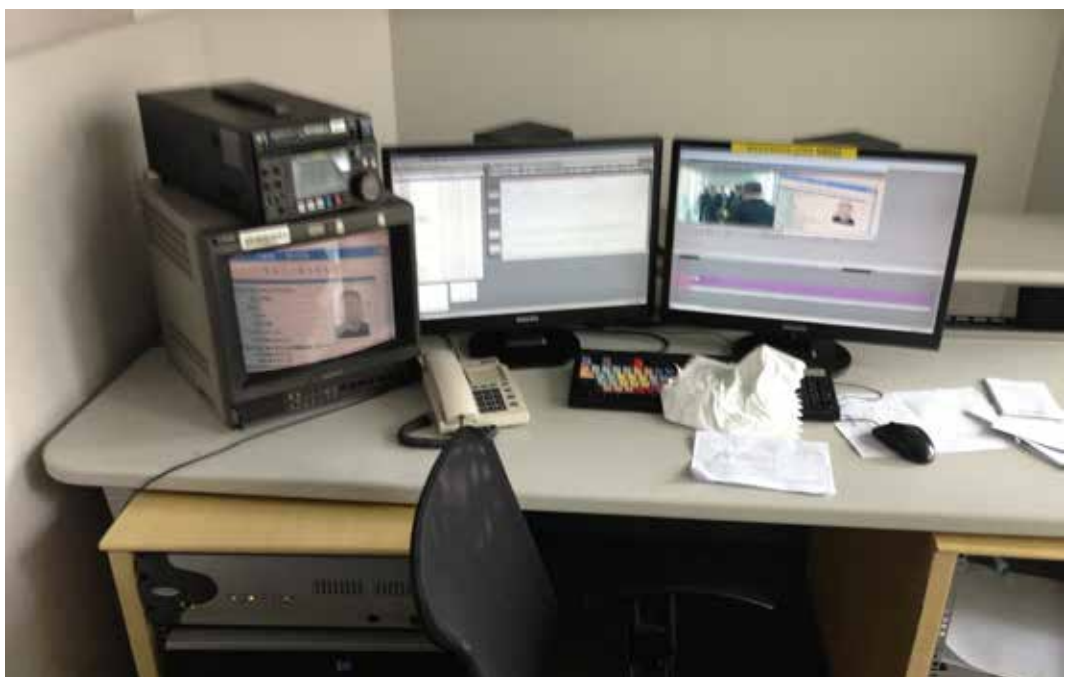
The studio utilises DMX controlled lighting and it is mapped as a 3D space. The cameras plane of view makes it able to adjust the 3D animations.

Of the two studios on the floor, the first was built for an entertainment only, whilst the second studio covers other genres.



*SMG TV studio floor wide shot*

To compare this with the Australian industry, television in Australia is going through a process of rationalisation in the face of dwindling revenue streams, as viewers shift to internet based programs. At Dragon TV, the majority of studio cameras are automated using Vinten robotics, with one operator controlling several cameras simultaneously. The major Australian networks are currently shifting to this mode of operation, whilst also automating graphics systems and consolidating Control Room roles. In some respects, it appears to be the common experience, that with the recent leap forward in technological development across China, the take up of these new job roles has had no history to hold it back in terms of a need for retraining, or role shifting.



*SMG TV AVID Edit suite*

## 6. The International Experience

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SMG TV Finance program set

## 6. The International Experience

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### SMG Television – Dragon TV



SMG Dragon Entertainment



SMG Dragon TV News Center



## 6. The International Experience

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*SMG Dragon TV News Center*

This was also the first encounter of competing technological systems being present within the same workflow. For instance, at Dragon TV there were three competing graphics companies providing technical support. It was explained that this is due to a number of factors including the bargaining power it gives management in purchasing equipment.



*SMG Dragon Server/Router rack*

## 6. The International Experience

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*SMG Dragon News update set*



*SMG Dragon Control Room wide shot*

## 6. The International Experience

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Other factors revolve around the expected redundancy of equipment across a five year cycle, where companies may not exist past a certain point, or new and better systems may have been developed to advance production more efficiently, or to better effect. There is also an emphasis on supporting local Chinese manufacturers.

The main companies providing technical equipment and support included the previously mentioned ORAD, AVID, VIZrt and native systems to China called Dayang and Sobey, which also incorporate editing modules. Studionet is also used as a native Chinese equivalent to AVID. This allows edited footage to be made available to the Control Room for broadcast. The audio desk is digital and made by Soundcraft, which supply to Australia also.



*SMG Dragon Robotic camera control made by Vinton*



## 6. The International Experience

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SMG Dragon Concerto Grass Valley Router rack



SMG Dragon Studionet payout

A significant factor associated with the use of all these systems is censorship and whilst Shanghai organisations are given increased freedom being considered a world city centre, the impact is never very far away. Specifically, it affects the workflow, as all completed elements must be completed and approved before being broadcast. At the very least it slows the process. Similar items in Australia do not need to go through this process as the News Producer has the final say over content, with the News Manager's support. Items also do not need to be completed before being approved by a News Producer.



SMG Dragon Audio mixer

## 6. The International Experience

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SMG Dragon Camera mount autocue hood



## 6. The International Experience

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*SMG Dragon Camera on pedestal*

It was surprising that in a country renowned for utilising every space available, the Control Rooms and other facilities were spacious and ergonomic in their layout.

## 6. The International Experience

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*SMG Dragon TV News Control Room*

The sheer size of the facilities is three to four times the size of the equivalent establishments in Australian networks; however many of these factors were difficult to fully realise given the directed nature of the tour and the restricted areas that were not made accessible. Having said that, the access provided would be unparalleled in any other context.



*SMG Dragon Studio wide shot*

## 6. The International Experience

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### He Fei via Nanjing



*He Fei Yingping Broadcasting Training School Entrance*



*He Fei Yingping Broadcasting Training School Radio facility*



## 6. The International Experience

A late offer was made to witness TV talent training in He Fei and visit the local TV network, which was in transition between an old building and new complex specifically built to house modern television studios and production.

He Fei is considered to be a minor Chinese city of an approximate population of seven million people. However, even in this context, English is seen as a vehicle to greater family wealth and so the program that was being produced at that time was an English competition for children.

The staff spoke of wishing they had more in depth training and specialised mentorship in developing their television production skills. Most noticeable were the issues being experienced in audio and lighting practices, which require a high level of expertise.

Unfortunately, photos and recorded vision were not permitted due to security and censorship. Access was also restricted significantly and visiting the new complex was not allowed. In the more remote locations the observation of censorship protocols was stricter.

It was surprising how much broadcast television continued to be in Standard Definition and a 4:3 aspect ratio. The equipment was of an archaic nature and emphasised the lack of funding compared to Dragon TV; however, given the Fellows were not able to view the newly built facilities, it was not possible to make a direct comparison.



He Fei course chart



## ***6. The International Experience***

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The visit to the talent school did not seem as specific to television as expected. Training was focused on music, dance and art. Television training was restricted to combined experience with radio training.

## 6. The International Experience

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*He Fei talent dancing class*

### **Nanjing - Jiangsu TV**

Nanjing is the capital of Jiangsu Province in eastern China and has a prominent place in Chinese



History. It has held, on several occasions, the title as the nation's capital and it remains an important



## 6. The International Experience

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He Fei Train station platforms



Nanjing You Are The One set

## 6. The International Experience

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Before the production took place, there was an opportunity to look at the lighting set up, which for a program such as this is extensive to say the least. There was also an opportunity to look at the set and the interaction of plasma displays and effects lighting. This process utilised ADB Lighting technologies and a Pearl 2008 moving light controller with a grand MA. This was another example where many concurrent systems and brands were used. Furthermore, recording systems further down the chain, were produced by Dayang, but with SONY Production switches integrated with Dayang edit suites. An explanation was difficult to obtain due to language difficulties and time constraints with the program about to record.



*Nanjing Jiangsu Broadcasting Corporation foyer*



## 6. The International Experience

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*Nanjing Set left*



*Nanjing Set middle*

## 6. The International Experience

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*Nanjing Set right*

Given the show is replayed on SBS in Australia, it was a program that was familiar, so to see it live was impressive. The very nature of the program is also telling of China's current affairs in terms of gender trends. Thirty years of a one child policy has altered the gender balance and 'If You Are The One' has tapped into that by offering one male up to the scrutiny of twenty four women. The differences in social interaction extend to this program also. Securing a date in this context is seen as a serious step toward a long term commitment.



*Nanjing Master Control*

Jiangsu TV also provided a tour of the news and editing facilities; however cameras were once again banned. The 'Electronic News Gathering' cameras were very similar to those used in Australia and the



## 6. The International Experience

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*Nanjing Lighting hardware*  
facilities built around that operation were virtually identical.



*Nanjing Lighting mixer & operator*

## 6. The International Experience

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However, once again the editing area was at least three to four times the size of what would be considered normal in an Australian network. There was no confirmation of why this was the case, but the indication was that this was due to censorship forcing every packaged story to be completed before being assessed for suitability to be broadcast. An edit suite and journalist is also relatively inexpensive to maintain.



*Nanjing Control Room wide shot*

It should be noted that Australia is in the process of heading toward a similar model, in that journalists will be required to edit their own packages unless graphics, sound effects or special transitions are required in packages.

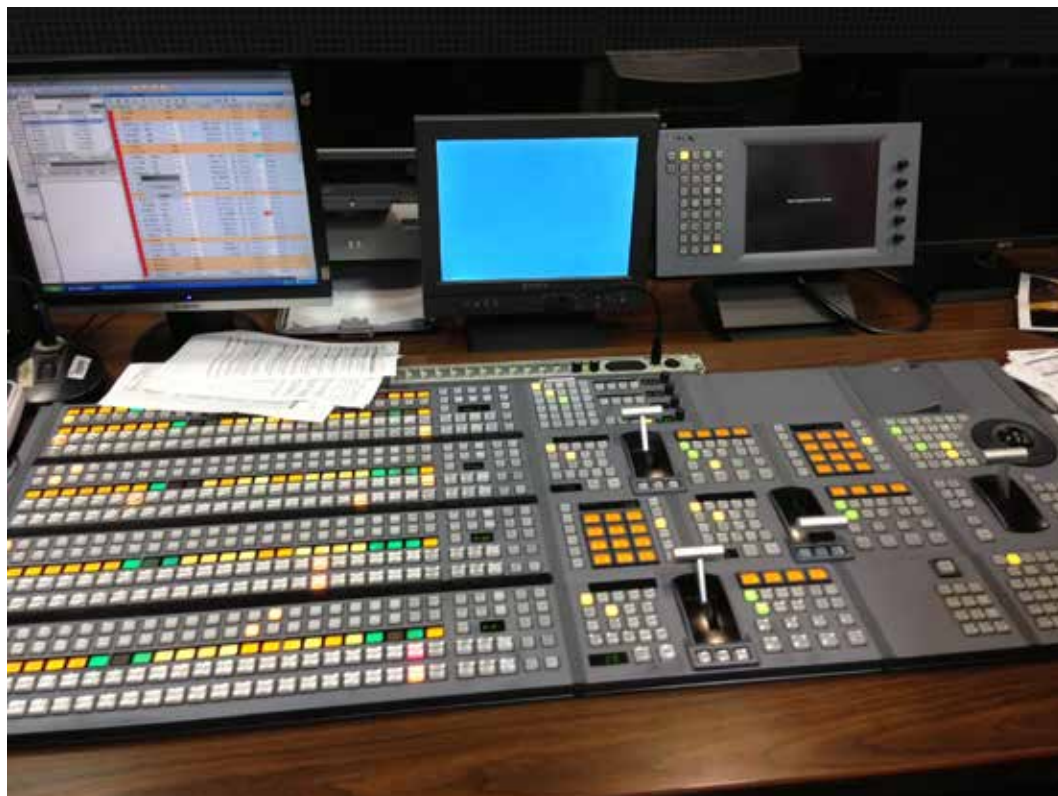
The Jiangsu TV building, along with most Chinese television facilities, is going through a period of massive infrastructure development. The lot of land adjacent to the main towers is having a further tower added, with a four story basement. This will create added space for the rise in the number of channels offered to the region and the program content, which follows a similar spread to that currently in Australia. However, it would appear that there is less production of sport based content across the nation.



*Nanjing Construction of new tower*

## 6. The International Experience

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Nanjing SONY vision mixer  
**Beijing – EVS Beijing**



*EVS China - Raymond Chan*

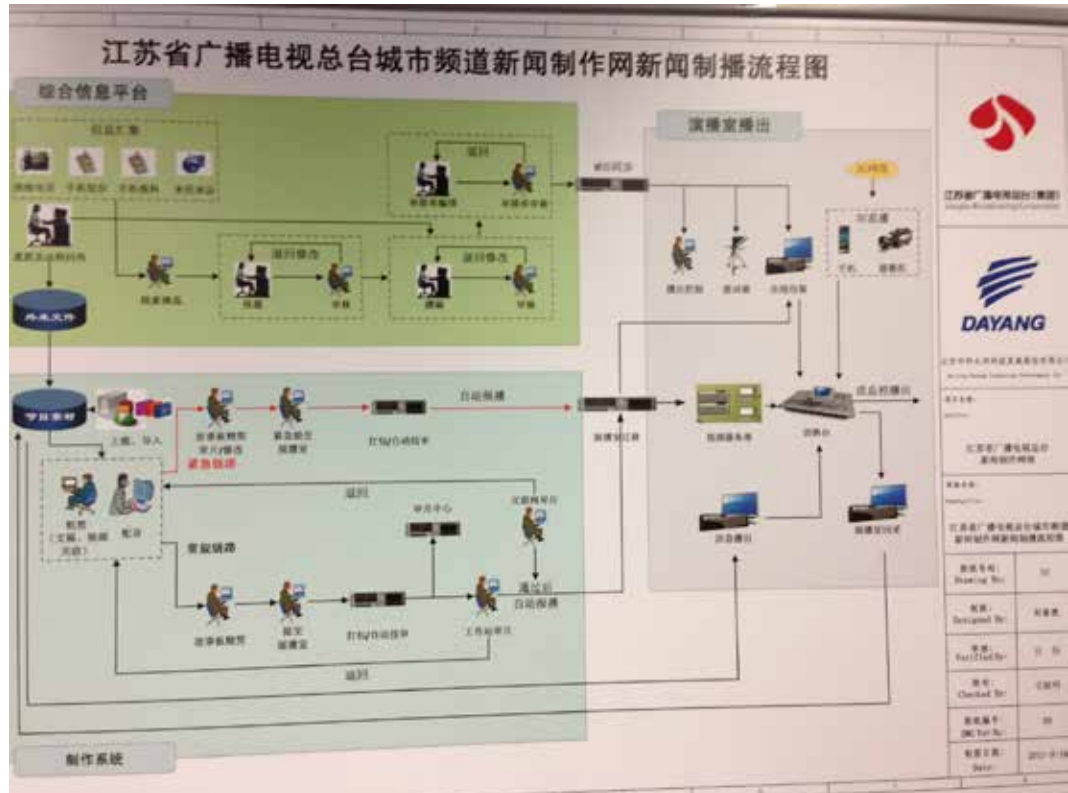
advantages of EVS over their native systems.

Raymond Chan, who is head of both Sales and Servicing at EVS Beijing, gave a thorough overview of Chinese Television and the areas of most prominent development, in an anecdotal discussion of the state of Chinese television. He mentioned how difficult it was to get a foothold, as a preferred provider of playback devices and technical support. The nature of modern business culture is to spread investment across many systems and this made it difficult to build significant volume of sales and also to integrate with other systems purchased. He noted a lack of understanding as to the

The business environment was described as somewhat parochial, politically driven and complex in terms of building trade relations.



## 6. The International Experience



Nanjing Post Production/Dayang 'mud map'

### Beijing – VIZrt

David Li, Head of Sales, describes the business environment as a tough, but a massive market that continues to provide opportunities for progress. It is certainly seen to be the current 'hot spot' for the expansion and development of VIZrt graphics systems. The budgets that are attached to the projects pursued provide for the highest end products that can be achieved in the field and so this alone has massive appeal to the Chinese who are enjoying their new status as the world leaders in the industry. This has allowed VIZrt themselves to pursue priorities in virtual set delivery and new ways of streaming data directly into a television coverage.

### Beijing – CCTV



## 6. The International Experience

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This organisation is regarded as the most prominent provider of television content to the Chinese nation. In comparing it to the Australian television landscape, it is an organisation that is providing services not yet fully developed at Australian networks such as fully virtual sets, innovations in mounted cameras and integrated graphic concepts. The factor that can never be overlooked is the nature of government control and investment in these facilities. Coming from a history of complete government control, there is a new ethos that has become apparent. All media organisations are encouraged to operate as private enterprises, to produce revenue streams and in general compete in the market and mimic their equivalents in a free market.

The most striking story told concerned the demise of the previous CCTV building. A New Year fireworks show had gone horribly wrong when organisers asked for it to be in the shape of a flowing river down the side of the building. The fire damage that resulted made the building untenable as a going concern and so the new building was commissioned. Many billions of dollars later and a new state of the art complex now takes pride of place on the Beijing horizon.

This new complex includes two linked towers, one housing Entertainment and the other News, Sport, Weather and Current Affairs. The piece of the building that links the two appears to defy gravity and contains a conference centre for presentation and education purposes. A further oval building houses the many Live Eye vans and OB truck resources. It was described that where major events take place around the nation, rather than trusting the local news gatherers, CCTV would prefer to send their own people and facilities to capture content for broadcast out of Beijing and out to their subsidiaries. It was further described that money was never an issue, whilst prevalent was a lack of trust in supply of content and information.



*EVS – Operator hardware/control Live Slow Motion unit*

## **6. The International Experience**

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The dual tower complex contains approximately 50 studio spaces, with 20 facilitating virtual set productions. The division of tasks reflects that experienced in other parts of the country in terms of workflows, tapeless production and the editing and graphics systems. However, the division of tasks within those departments varies from both smaller providers in China and those here in Australia. For instance, the graphics department is split into daily Photoshop Artist production, through to After Effects suites. It further extends to 3D compositing suites and associated edit suites.

## 6. The International Experience



*CCTV Organisational chart*

CCTV proved to be extremely security conscious and hence the Fellows were only given access to the Entertainment tower, which was still being appointed. As a result there was very little 'LIVE' television being produced at that time. In fact the only program they could show in production was one centred on the local Beijing Soccer team. There was a distinct lack of interest in local soccer leagues, as the country's focus was much more on the world sport scene.



*CCTV Control Room*

The cameras used in studio were Ikegami and monitoring was Shotoku; however, beyond this access was heavily restricted. Even the majority of staff proclaimed to know very little about other parts of the organisation and the facilities being built.

Access was provided to the virtual studios being built and once again a crossover of competing brands and massive 'future-proofing' provisions was witnessed. It was explained that the Technical department made all decisions on the purchase of equipment, with little consultation with operators.

The major provider of technical staff across the country came from the Communications University 300 kilometres west of Beijing.



## **6. The International Experience**

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### **Summary**

Across the board, there remained a massive contradiction, in that investment in technology was extraordinary in its proportion; however, careers in the television industry were considered to be a lowly choice amongst young people considering their career.

Government involvement remains high through the censorship department, although the freer market was leading to popular world franchises becoming prevalent such as 'Chinese Idol'.

Despite the consensus that China is advancing into tapeless production, Native HD, widescreen and broadband delivery, there are many 'lag effects' currently at play.

Chinese television remains the leader in technological stockpiling; however, European, American and even Australian television workflows and practices, have much to offer in exploiting the most modern genres of programming.

Tapeless production was seen at each television provider in all of the major cities. Each had varying methods of transferring data between capture device, control room and transmission streams. This made it very difficult to gauge the absolute efficiency of each system due to the disparate technology involved and due to the language barrier. However what was clear was the tendency to favour multiple technology providers (for financial bargaining power) and to heavily invest in local technology where possible.

## ***6. The International Experience***

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*CCTV From above*

## 6. The International Experience

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*CCTV Graphics suites and 3D*



*CCTV Shotoku view finder*



*CCTV Blue screen virtual studio*



*CCTV Blue screen virtual studio wideshow*

# 7. Knowledge Transfer: Applying the Outcomes

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Knowledge emanating from the Fellowship experience has been transferred in several forms since returning.

Primarily, a summary was delivered to the ISS Institute group at the offices of KPMG in Collins Street, Melbourne.

Further presentations have been made at NMIT studios where discussions were held with the 70 students attending the institute. This will filter into each role taken up by students as they complete their courses and move into industry. Already we have seen the effects of that, when 22 students were provided opportunities to work on the recent productions of *The Recruit* (Fox 8) and *The Block* (Channel 9).

Lovett has since begun employment once more in industry, at McGuire Media, where the knowledge gained has been presented in consultation with colleagues and clients, particularly in the field of virtual studios and graphics. A direct example of this will be the upcoming Asian Football Cup (AFC) presentation, held in January 2015 across locations in Melbourne, Canberra, Sydney, Newcastle and Brisbane.

Similarly, Gospel has also commenced employment for the technical support based company Videocraft in Burwood, Victoria. In communication with colleagues and clients, the knowledge gained will have a far greater reach and impact than could have been anticipated prior to the fellowship being undertaken.

In particular, knowledge of file transfer, storage and pathways, will be of major benefit to the local industry. Broader understanding in the multiple uses of EVS and VIZrt technology will also be of benefit.



# 8. Recommendations

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## Industry

The leading advantage to work towards adopting in Australia, following the overview of Chinese television operation, is the pursuit of a completely tapeless workflow. Chinese investment is allowing this process to be an end-to-end innovation, whereas in Australia the pathway for signals and files is often incomplete and these gaps cause a need for regular duplication, file conversion, decompression and added storage requirements.

## Government

Contrary to media reports read in the build up to the trip about a heavy investment in 3D technology, there was actually no evidence of a continued pursuit toward this goal. When asked, the Chinese industry participants did not see the consumer value in it and the costs involved were even prohibitive to a wealthy Chinese TV Station. So given the tight financial constraints that Australian networks are currently working under, any ideas surrounding the development of 3D broadcasts should be abandoned, as they have now been in the United Kingdom.

## Industry/Government

It is inevitable that the advancements being made in terms of virtual studios and graphics will eventually make their way to Australia. However, it will rely on the next phase of investment, which will take some time to evolve in the current economic climate, as it relies on significant dedication of resources.