### Day 1  
**Wednesday 9 July 2014**

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<th>Session</th>
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<td>Welcome &amp; Registration</td>
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<tr>
<td>11am</td>
<td>Keynote 1</td>
<td>Dr Jeff Jacobson</td>
<td>Interactive Large Screen Media for Education</td>
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<tr>
<td>11.30am</td>
<td>Keynote 2</td>
<td>Ann Doyle</td>
<td>Performing Arts Over Advanced Research and Education Networking: A story of the unexpected</td>
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<td>12pm</td>
<td>Session 1</td>
<td>Ben Newsome</td>
<td>Best Practice in Educational Video Conferencing; North American perspectives</td>
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<td>Isabelle Kingsley</td>
<td>Using Technology and Project Based Learning to Deliver Authentic Science Experiences</td>
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<tr>
<td>1pm</td>
<td>Lunch</td>
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<tr>
<td>1.40 – 2pm</td>
<td>Dessert Session</td>
<td>LOLA Live</td>
<td>Science Live @ Te Papa: Live Streaming Science Online</td>
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<td>Scott Ogilvie, Ruth Hendry</td>
<td>TransEd Adventures: Game Design, Storyworlds, Transmedia and Educational Adventuring</td>
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<td>2.30pm</td>
<td>Session 4</td>
<td>Jess McCulloch and Daniel Donahoo</td>
<td>Can we do that again? Developing a virtual excursion program for ongoing student engagement</td>
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<tr>
<td>3pm</td>
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<td>3.30pm</td>
<td>Session 6</td>
<td>Kyle Staggard, Alison Andrea</td>
<td>Interactive, Online VCE courses: The Victorian Virtual Learning Network model</td>
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<tr>
<td>4pm</td>
<td>Afternoon tea</td>
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<tr>
<td>4.30pm</td>
<td>Showcase 1</td>
<td>Karen Player</td>
<td>Virtual Excursions Australia – One year on</td>
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<tr>
<td>4.40pm</td>
<td>Showcase 2</td>
<td>Lynette Rosenberg</td>
<td>Effective, Sustainable, Intervention and Education Overcoming Physical And Financial Obstacles With Modern Technology To Deliver Effective, Life-Changing Intervention And Education</td>
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<tr>
<td>5.05pm</td>
<td>Showcase 3</td>
<td>Kim Montgomery</td>
<td>Beyond the Exhibition: Transforming the User Experience</td>
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<tr>
<td>5.30pm</td>
<td>Session 7</td>
<td>Sara Cousins</td>
<td>Live Interactive Educational Programming with the ABC</td>
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<td>6pm</td>
<td>Closing Comments (15 minutes)</td>
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KEYNOTE 1  

Title  
Interactive Large Screen Media for Education

Presenter  
Dr Jeff Jacobson, USA

Abstract  
Certain media immerse us in an artificial environment or universe, which in the end is an act of imagination on our part. A perfect example is a living museum where live actors are part of a recreated historical site. More often the visual environment is digital, created by a digital dome theatre (e.g. planetarium), a virtual reality CAVE or a head mounted display. Lastly, a mixture of physical and digital props can be used to great effect, usually in museums.

In this presentation we will discuss the educational use of media that are (1) psychologically immersive, (2) interactive and participatory, (3) fully or partially based on a computer-generated 3D virtual environment, and (4) shown in a large screen display, so a group can share the experience. For example, PublicVR’s Living Forest (displayed in an all-digital dome theatre) supports teacher-led student activities. The season and age of the forest can change instantly. In another example, a live-guided tour of our Virtual Egyptian Temple (on a very large flat screen) was effective and popular with grade-school teachers and their students.

We find interactive large screen media most useful when (1) there is some three-dimensional structure or environment that is significant, (2) the inside view of that structure is important, (3) there are narrative elements where social-spatial placement of virtual actors with respect to the audience is important, (4) the topic benefits from narrative shifts in time, space or scale that would not be possible in the real world. Research is still scant but early results show that audience members definitely learn from the experience and gain a well-integrated sense of the material.

Biography  
Jeffrey Jacobson, Ph.D., is the Director of PublicVR (http://publicVR.org), a non-profit dedicated to free software and research in virtual reality for Education. He has been involved in Virtual Reality for 20 years, consulting in a wide range of applications. Most recently he advised for Curtin University in Perth Australia on the best use of the five immersive displays in their new HIVE lab. Dr. Jacobson's learning experiments have produced evidence of superior learning in an immersive display (a dome) compared to a standard desktop computer in a learning game for cultural heritage. He worked with the Carnegie Museum of Natural History and the Connecticut Science Centre to extend their physical collections into the virtual space of their large screen displays. His NEH-funded Egyptian Oracle performance combining live performance, digital puppetry, and audience participation showed at the Boston Museum of Science in 2013. CaveUT, a freeware modification to Unreal Tournament that enables the game to support multiscreen immersive displays, has garnered over 500 citations in the scientific literature over the years. He also developed a VR simulator for the Medical Virtual Reality Centre to support their research in visual effects with balance disorders. Dr. Jacobson has written over fifty peer-reviewed journal and conference papers and a hundred more writings of other types. For more information, see http://publicVR.org/JacobsonResume.pdf

KEYNOTE 2  

Title  
Performing Arts over Advanced Research and Education Networking: A story of the unexpected.

Presenter  
Ann Doyle  
Global and Cultural Programs, Internet2, USA

Abstract  
During the early years of the new millennium, a global fabric of research and education networks was created with the goal of enabling research scientists to share data and remote instrumentation. As with every great invention, the unexpected occurred. An inventive group of performing arts faculty took a set of technologies (intended for surveillance purposes), ran them over Internet2 (the then newly created U.S. research and education network) and taught a music lesson. The professor was remotely located in the rural Midwest, the student was located in a major urban centre two thousand kilometres away. In this presentation, Ann Doyle will capture the significance of this unexpected innovation, showcase its global adoption and highlight current opportunities and best practices.

Biography  
Ann Doyle directs Internet2’s global and cultural programs, fostering partnerships between Internet2 member campuses and global partners with a unique area of expertise at the intersection of performing arts and advanced networking. Ann founded Internet2’s Arts & Humanities Initiatives working with arts organization across the U.S. and eventually the world to enable collaborative live performances, master classes and remote auditions. Ann has a humanities undergraduate degree and a master’s degree in higher education administration from the University of Michigan and is known in the greater Detroit area for her career as a singer-songwriter.
SESSION 1

Abstract
This presentation provides an overview of a Winston Churchill Fellowship undertaken during May and June 2014. The 6 week study tour took the author through a variety of museums, zoos, aquariums and science centres in North America whereby educators shared their delivery techniques, distance learning content and their perspectives on creating engaging educational video conferences. Discussion centred around:

• Standard uses of VC systems (interactivity ideas etc)
• Content sharing to interactive whiteboards via smart notebooks or similar
• Use of chroma-key
• VC meshed to tablets and desktops
• Module based sessions and flipped learning ideas
• Teacher professional development and training for in-house staff
• Reaching audiences outside of schools (retirement homes, libraries, clubs etc.)
• Collaborations with content providers plus software and hardware vendors.
• Sound/lighting/AV
• Bridging and booking systems
• Trends in audience requirements
• Where might the future lead?

The presentation will give a snapshot of the institutions visited and where new developments lie. Further information on the research will be published through The Winston Churchill Memorial Trust and Virtual Excursions Australia entitled “The Northern Districts Education Centre (Sydney) Churchill Fellowship to investigate best practice in science education via video conferencing - Canada, USA”.

Biography
Ben Newsome is the founder of Fizzics Education and co-founder of Virtual Excursions Australia. A qualified teacher and science outreach specialist, his company reaches over 120,000 students each year via incursion and video conferences across Australia and around the world using traditional codec systems and BYOD H.323 technology. Between May and July this year Ben visited 16 cultural institutions in North America as part of a Winston Churchill Fellowship looking at best practice in science education via video conference.

twitter.com/BenNewsome
fizzicseducation.com.au

SESSION 2

Abstract
The 30 year decline in young people undertaking science in senior secondary school includes a decline in Earth Science study. The Mars Lab is a federally funded two year partnership between the Powerhouse Museum, Sydney University, and the University of NSW, which delivers direct and practical learner engagement with contemporary science and engineering. The project makes a unique range of experiences and learning objects including a 140 square metre scientifically accurate replica of the Martian surface and three experimental Mars Rovers, accessible to Australian school and university learners.

Classroom learning modules (developed and refined in partnership with teachers from multiple schools across three states) engage young Australians in authentic learning challenges related to the search for evidence of life on Mars and the technologies which enable that search. Progressive educational approaches and unique digital tools and software, activate learners to work collaboratively in planning scientific missions to investigate the rocks and geological features in the Mars Yard. They then connect to the Mars Lab from their classroom via web interface and video conference and carry out missions by controlling rovers and operating scientific instruments. Evidence including photographic images and instrument data is captured for post-mission analysis and interpretation.

This presentation illustrates the development and implementation of the educational materials, including the unique digital tools and software, during the project’s pilot phase. Results and challenges are explored through case study examples. One classroom learning module, Project Mars, which employs the Project Based Learning approach is highlighted.

Biographies
Isabelle Kingsley is Program Producer for the Mars Lab – a 140 square metre replica of the Martian surface and robotics lab established within Sydney’s Powerhouse Museum. Isabelle’s role is to develop education programs that engage young people in authentic science experiences through the search for evidence of life on Mars. Her aim is to make science real and exciting through genuine discovery and opportunities to understand how science works by being scientists themselves. Prior to joining the Museum, Isabelle worked as a high school science teacher and in various roles at the Canada Science and Technology Museum and the Australian Museum.

Peter Mahony is Manager of Learning and Technology at Museum of Applied Arts and Sciences based at Powerhouse. He is responsible for program direction and delivery for the Thinkspace digital learning centre and curriculum leader for a range of education projects including The Mars Lab. Thinkspace offers ‘technology amplified’ learning experiences including music and video, game design and programming, robotics and electronics for children, families, school groups, teachers and people with a disability. Qualifications include a Master of Teaching, Graduate Diploma in Music Therapy, and Bachelor of Arts. Peter’s background is in community and performing arts, including international touring as an entertainer and musician and currently performs with gospel choir Cafe of the Gate of Salvation.
SESSION 3

Title
Science Live @ Te Papa: Live Streaming Science Online

Presenters
Scott Ogilvie
Senior Educator, Museum of New Zealand Te Papa Tongarewa

Ruth Hendry
Website Administrator, Museum of New Zealand Te Papa Tongarewa

Abstract
How does the Museum of New Zealand Te Papa Tongarewa use live streaming to make science learning an engaging and entertaining experience?

Science Live @ Te Papa is one of the ways in which the Museum communicates its cutting edge scientific research to a global audience, with a primary audience of students aged 10 - 14 and their teachers. Science Live @ Te Papa uses YouTube as a platform to deliver exciting and unique live science straight into classrooms and homes, with the added element of surprise that occurs when you’re filming real science in action!

Science Live is an innovative, interactive method of disseminating Te Papa’s scientific expertise and research knowledge. Viewers can ask the scientists questions via YouTube, email and social media on a whole range of topics from “What’s the biggest crustacean?”, to “How is genetic analysis used in research?” via How do I become a scientist?

Scott Ogilvie (Senior Educator) and Ruth Hendry (Online Advisor) will discuss why Te Papa uses live streaming to communicate their scientific research, the technology behind live streaming and what the future holds for live streaming science in the Museum.

Biographies
Scott Ogilvie develops and presents education programs to school groups visiting Te Papa. With a background in primary education and science and over a decade working in science communication in both New Zealand and Australia he has a strong interest in promoting science education in primary schools.

Ruth Hendry advises on the Museum of New Zealand Te Papa Tongarewa’s online projects. With several years experience in science communication, her interest is using digital technologies to share the Museum’s stories with a wider audience.

SESSION 4

Title
TransEd Adventures: Game Design, Storyworlds, Transmedia and Educational Adventuring

Presenters
Jess McCulloch & Daniel Donahoo

Abstract
We’re not sure if you have been told yet, but the time has come for you all to go on an adventure. A deeper, richer, more meaningful adventure than you have ever been on before. If you are brave enough to join us, you will traverse the transmedia in education landscape to meet The Doom of Not Knowing head on and learn how a story based approach was key to creating an exciting new resource for learning across several forms of media. You will take part in The Institute of The Modern Learner, a new innovative narrative based PD program for teachers that focuses on applying contemporary pedagogical theories. You will hear how The Great Wall of China has been stolen in order to benefit students who are learning the fundamentals of how grammar works, especially in the Chinese language and you may be required to help Fergus The Duck find the secret to growing a moustache. This is all very serious business and very very true. This is storyworld building, and filling that cavernous area between student and content that previously may have meant nothing to them.

Jess McCulloch and Dan Donahoo live in Deep Outer Space and keep many ninja chickens as pets, but do come back to earth every now and again and bring their special storyworld building powers with them. They regularly have meetings with secret agents and other shady individuals and have been chased by those who would prefer to see them locked away in a complex labyrinth forever. This presentation will provoke. Dan and Jess will offer their experience designing playful learning environments for students that focus on the interplay between story, technology and learning. You will hear about how to design alternate reality games for inside and outside the classroom, be introduced to how to use tools that deliver transmedia educational experiences and through practical examples of how Jess and Dan bring together emergent design, story and pedagogy that gives agency to young learners and demonstrates the power of trust and technology when placed in students hands.

Your adventure begins now, if you wish it to be so.

Biographies
Jess McCulloch is a teacher who has taught all year levels and who has been recognised for her work in bringing transmedia storytelling to education for the ESA and Melbourne University project, The Dragon Collective Trilogy. She is also an experienced teacher trainer who has worked for Independent Schools Victoria, DEECD and the Chinese Teacher Training Centre (at The University of Melbourne).

Daniel Donahoo has worked across the child and family sector in government, private and research roles for over 15 years. He is recognised for the development of new ideas and insights and the delivery of innovative early childhood programs, policy and research in Australia and overseas. Daniel is the author of Idolising Children (UNSW, 2007) and co-author of Adproofing Your Kids (Finch, 2010). He currently writes for established online publications Wired and the Huffington Post on education, technology and impact. Daniel is also a nominated contributor to the New Media Consortium- an international collective of academics and researchers interested in the use of new technology to support educational outcomes. As well as being a Director of his own emerging educational app development company Deeper Richer, Daniel produces work through his consultancy Project Synthesis. Daniel has also worked with LEGO Learning Institute, Melbourne University’s Graduate School of Education, the National Gallery of Australia, Independent Schools Victoria, the Department of Education and Early Childhood Development and recognised app developers like Toca Boca and Launchpad Toys to create cutting edge programs and engage in research and new ideas.
SESSION 5

Title
Can We Do That Again? Developing a virtual excursion program for ongoing student engagement

Presenter
Natalie Sullivan
Coordinator, Questacon Digital Outreach

Abstract
Questacon – The National Science & Technology Centre began a program of project-based virtual excursions with the 2013 Mission Astronautica Challenge. The challenge aimed to promote STEM careers by connecting students with professionals and providing them with a positive engineering experience. Secondary school students were challenged to do the work of NASA engineers with a hands-on project demonstrating the obstacles Astronauts face when working in microgravity. They then presented their work to NASA-Raytheon Engineers (mentors) at the Neutral Buoyancy Laboratory in Houston, Texas. The project was successful in highlighting the ability of students to innovate and develop creative solutions. However, despite having access to a direct e-mailbox, students were reluctant to communicate with mentors outside of the video conference events. To address this, a consequent project will focus on building a collaborative online environment for students and experts to share their experiences with the challenge. This presentation will look at the differences between these two projects and discuss the lessons learned.

Biography
Natalie Sullivan completed an Ecology honours degree in 2004. She spent the next 5 years involved in numerous Ecological research projects – identifying native Australian plants on the sandy beaches of Australia’s east coast; chasing scorpions across the red soil of the dry north-west; collecting exotic bee species from a southern wine region – but eventually she was drawn from science research to communication. In 2010 Natalie joined the Questacon Outreach team and has since worked with numerous programs, touring Australia and Vietnam to talk with students and teachers about science, technology and innovation. Natalie is now the Coordinator of Questacon Digital Outreach, working on the development and delivery of video conference programs.

SESSION 6

Title
Interactive, Online VCE courses: The Victorian Virtual Learning Network model

Presenters
Kyle Staggard
Mathematics Teacher – Victorian Virtual Learning Network
Alison Andrea
Psychology Teacher – Victorian Virtual Learning Network

Abstract
The Victorian Virtual Learning Network is an initiative of Bendigo Senior Secondary College and currently delivers VCAA curriculum in a number of Mathematics, Science and Humanities subjects to 250 students around Victoria and internationally, entirely online.

From its origins as a research challenge (to investigate the possibility of delivering VCE curriculum online) the VVLN has developed into a uniquely innovative system of remote curriculum delivery, serving the needs of small rural schools from as far as Swift’s Creek in Victoria’s East, Dimboola in the state’s West and one exchange student in Poland.

The VVLN uses a fully online, asynchronous model, delivered from a Moodle platform. All learning resources are digital and incorporate audio, video, manipulative and traditional pen and paper activities. They are entirely instructional, giving students learning experiences that are similar to traditional classroom settings, yet accessed via the internet. VVLN students are fully supported with regular online and face-to-face contact with their teachers.

During the presentation, the VVLN system will be demonstrated using sample learning modules and activities. There will be a discussion around the educational design principles and philosophies that have been considered during course development.

In 2013, the VVLN project won the Victorian Education Excellence Award for Outstanding Curriculum Innovation.

Biographies
Kyle Staggard’s mathematics teaching experience spans 26 years in city and rural schools in Australia and includes 5 years as a teacher in Zimbabwe, Africa. He has worked as a VCE Mathematics examination writer and assessor of mathematics for the past 8 years.

In 2008, Kyle was instrumental in establishing the Victorian Virtual Learning Network, designing and refining many of the techniques and processes for online course development and delivery used by the VVLN today. He has created online, interactive courses in General Mathematics, Mathematical Methods and Specialist Mathematics and is currently teaching Year 11 and Year 12 level students in these subjects, entirely online.

Alison Andrea is an experienced senior school teacher who has taught a variety of subjects across the VCE curriculum. She has worked in alternative and mainstream educational settings and has identified the need for a supportive environment for students who are studying by distance and are not in the classroom. For the past two years Alison has worked developing and implementing the VCE Psychology course with the Victorian Virtual Learning Network.
SHOWCASE 1

Title
Virtual Excursions Australia – One year on

Presenter
Karen Player
Museum Outreach Manager, Australian Museum

Abstract
Virtual Excursions Australia (VEA) is a collaborative network of video conferencing providers. We have developed a website and a social media presence that acts as a portal for teachers wanting information about video conferencing events and content providers.

Virtual Excursions Australia was officially launched at the 2013 ITEC conference. Since that time the network has grown with over 20 organisations listing on the Virtual Excursions Australia website and many more participating in network meetings and events. In the last year, Virtual Excursions Australia has coordinated and promoted video conferencing festivals and events including ClickFest, Sea Week, SciFest, Dinosaur day and Pi Day. These events provide a platform for content providers to list their sessions enabling us to promote multiple organisations under the one event.

Virtual Excursions Australia continues to grow and is becoming a truly national network.

Biography
Karen Player has worked at the Australian Museum for the last 16 years and is the Museum Outreach Manager at the Australian Museum. Karen has a background in environmental education and is committed to outreach programs throughout New South Wales and beyond.

Karen has been coordinating Video Conferencing programs across the Australian Museum for the last five years providing a great opportunity for students to connect with the Australian Museum collection and experts. Karen is also the chair of Virtual Excursions Australia.

SHOWCASE 2

Title
Effective, Sustainable, Intervention and Education Overcoming Physical and Financial Obstacles with Modern Technology to Deliver Effective, Life-changing Intervention and Education

Presenter
Lynnette Rosenberg
Education Advisor, Hearing / School Support Services

Abstract
Historically the complexities of scattered student cohorts, inaccessible locations, limited numbers of specialised educators and constrained budgets, created many problems resulting in deficient student academic outcomes and restricted individual achievements. Today, using the advances of technology and the REACT program, we are able to provide effective, high quality intervention and education to students who are achieving life goals for a fraction of the cost.

In the Northern Territory (NT) we are faced with perhaps the most dispersed, isolated student cohort in Australia. We have the highest rate of hearing loss in the world experienced by our Aboriginal population. Our deaf and hearing impaired students who communicate using sign language rather than speech is a small percentage of the overall population, scattered throughout regional and remote locations.

The NT DoE Hearing team began building a remote service delivery intervention program a few years ago that has grown into a thriving, dynamic, multi-site participant specialised, communication and educational program – Supporting students to reach academic outcomes, develop functional living skills and find meaningful employment across the territory.

Biography
Lynnette Rosenberg is a registered AUSLAN/English Interpreter who has been working in the field for over 15 years. A qualified teacher, she is currently completing a Master of Special Education – Deaf and Hard of Hearing. Lynette began working in the NT in October 2008 in Wadeye (a community also known as Port Keats). Since moving to Darwin in January 2011, Lynette has been teaching and working with special needs students for the Department of Education (School Support Services) developing a remote service delivery curriculum and program.
Beyond the Exhibition: Transforming the User Experience

Kim Montgomery
Digital Programs Manager, Australian Centre for the Moving Image

Abstract
This is a case study and evaluation of ACMI's project Beyond the Exhibition: Transforming the User Experience of Museums. Funded through the Broadband-Enabled Innovation Program (BEIP) of the Department of Business and Innovation, the purpose of the project was to build the strategic and operational capabilities of ACMI to make innovative use of next generation information and communication technologies (in particular high capacity broadband networks) to find new ways to engage our users. The project was designed to establish an innovative high bandwidth content ecosystem for the production and distribution of museum exhibition content by delivering four major outputs that significantly extended the reach and impact of ACMI's Game Masters exhibition program. In addition there were a whole series of educational pilots that would continue after the exhibition, based around video conferencing as an ongoing and sustainable tool and program practice.

The suite of delivery platforms was:
• Mobile Game
• High Bandwidth interactive website
• e-Book
• Interactive video conference program

The aim of Beyond the Exhibition was to extend the opportunities and abilities of educators, students and the general public to engage with cultural exhibition content in new digital modes. It allowed ACMI to explore the roles of both exhibitor and producer to create ways for users to seamlessly engage and participate across digital and physical spaces.

The BEIP project has been a significant and transformative undertaking for ACMI and has helped define how we can think beyond the four walls of the exhibition and explore new digital spaces. This paper identifies the challenges, outcomes and learnings achieved in this project and how it has informed ACMi’s emerging digital strategy, content platforms and digital outreach program.

Biography
Kim Montgomery is the Digital Programs Manager at the Australian Centre for the Moving Image where she leads a team in the development of digital media, interactive projects and online initiatives. She has 30 years experience in innovative content development including production, programming, and media education for exhibition, television and festivals.

She has worked on major technology trials investigating distributed delivery of video collections across broadband, and currently advises on industry boards in relation to creative media for several universities. Her particular interests concern the ways in which emerging technologies offer new possibilities for educators, learners and communities to explore and exchange social memories.

Live Interactive Educational Programming with the ABC

Sara Cousins
Series Producer and Product Manager, ABC Splash Live

Abstract
"Some kids were amazed that it was actually live." Launched last year, ABC Splash Live is the first live participatory online education series by the ABC that allows students to drive their own learning experience. Following a successful creative pilot last year, the ABC has rolled out a national livestreamed half hour interactive educational show freely available online. It is a 'hyper-interactive' format and has taken the concept of real-time interaction and created a model of direct youth engagement combined with a high quality 'TV-like' experience. Students from anywhere in Australia with access to fast internet can take part in these live events and drive discussion by posting their live chat questions and comments. Catch up is available on iView and via on demand videos on the ABC Splash website. There is a 'gamified' aspect to the format where the students vote on the most popular questions prior to each livestream. The most popular questions are then put to the guests live as part of the show - creating a truly participatory experience. #ABCsplashLive

Biography
Sara Cousins is Series Producer and Product Manager for a new ABC education product, ABC Splash Live. Students interact in real-time with ABC talent to create a 30 minute show using livestreaming technologies and moderated online chat. Sara is also Senior Producer managing the scoping and delivery of multiplatform educational games. ABC Splash Live is one of the largest digital projects ever undertaken by ABC Innovation. ABC Splash, in partnership with Education Services Australia, provides access to a wealth of ABC contemporary and archival content linked to the Australian Curriculum, as well as a suite of engaging interactive educational resources. Previously, Sara was the producer of an internationally multi award winning education project Generator (a virtual studio space) and the micro-vlogging site and app, 15 Second Place for ACMI (Australian Centre for the Moving Image). Over the past eight years, she has worked in digital strategy, design and development across commercial, government and education sectors.
### Program:

#### Day 2

**Thursday 10 July 2014**

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<td>Keynote 3</td>
<td>Greg Zorbas, Kenai Central High School and Rob Sparks, Skyview High School</td>
<td>Visual Global Collaboration: How it has changed the way we teach</td>
</tr>
<tr>
<td>11.30am</td>
<td>Keynote 4</td>
<td>Jan Zanetis, Chief Executive Officer, CILC</td>
<td>BYOV-Connecting Students Globally with Video Everywhere</td>
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<tr>
<td>12pm</td>
<td>Session 1</td>
<td>Dr David Hooley, La Trobe University</td>
<td>The Freely Accessible Remote Laboratories (FAR Labs) project: linking school classrooms with university laboratories</td>
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<tr>
<td>12.30pm</td>
<td>Session 2</td>
<td>Jo Tate, Senior Project Officer Vic., Virtual Learning Project and Myung Sook AUH, Senior Lecturer UNE</td>
<td>Exploring Pedagogy for Video Conferenced Classrooms</td>
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<tr>
<td>1pm</td>
<td>Lunch</td>
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<tr>
<td>2pm</td>
<td>Showcase 1</td>
<td>Anyang Shingi, Elementary School, Korea and Higurashi Elementary School, Tokyo and Andy Mison, Principal, Northern Territory Music School and Executive Producer, VAMPtv</td>
<td>Putting the Vamp into International School Concert, (organised by Myung Sook AUH) and VAMPtv</td>
</tr>
<tr>
<td>3pm</td>
<td>Session 3</td>
<td>Ben Newsome, Science Educator &amp; Founder, Fizics Education</td>
<td>Creating Student Engagement in Video Conference Lessons, Ben Newsome</td>
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<tr>
<td>3:15pm</td>
<td>Showcase 4</td>
<td>Jo Tate, Senior Project Officer Vic., Virtual Learning Project &amp; Myung Sook AUH, Senior Lecturer UNE</td>
<td>Building Global Classrooms with Asia</td>
</tr>
<tr>
<td>3:30pm</td>
<td>Showcase 5</td>
<td>Robert Bunzli, Special Projects Manager, Education and Will Inveen, Director of Education at the Murray-Darling Basin Authority</td>
<td>Apps, Digital Studios, Robots and Water Policy. What’s the connection?</td>
</tr>
<tr>
<td>3:45pm</td>
<td>Showcase 6</td>
<td>Michael Beilharz, ICT Teaching and Learning Integrator, Instructional Coach, Knox Grammar School</td>
<td>Technologies for a Global Classroom</td>
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<tr>
<td>4pm</td>
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<tr>
<td>4.30pm</td>
<td>Session 4</td>
<td>Anne Mirtschin</td>
<td>The Amazing e-Classroom</td>
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<tr>
<td>5pm</td>
<td>Keynote 5</td>
<td>Mina Patel, Director Video Conferencing for Learning</td>
<td>Bringing Experts and Industry into London Classrooms: Using secure, interoperable VC connections</td>
</tr>
<tr>
<td>5.30pm</td>
<td>Keynote 6</td>
<td>Lloyd Godson</td>
<td>The Nautilus Exploration Program: Real-time participation in ocean exploration expeditions</td>
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<tr>
<td>6pm</td>
<td>Closing Comments (15 minutes)</td>
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**KEYNOTE 3**

**Title**
Visual Global Collaboration: How it has changed the way we teach

**Presenters**
Greg Zorbas
Kenai Central High School
Rob Sparks
Skyview High School

**Abstract**
In this presentation, attendees will have the opportunity to learn how students become engaged in a “hate to miss” learning environment, where various devices and software are used to collaborate and participate in problem-based learning with peers across the globe. Promote digital citizenship by educating students on the proper use of technology and research tools and on collaboration and videoconferencing etiquette. Engage students in classes using the technology they already know and rely on (such as mobile phones and tablets) and interactive learning experiences (such as virtual field trips to museums, universities or remote lessons on music’s role in shaping public opinion) that are typically not available in a traditional classroom setting. Enable teachers to teach to their individual strengths, while simultaneously giving students the benefit of learning from content experts. Provide access to large-school educational experiences for students. Expose students to the collaboration tools, from video conferencing and cloud-based applications like Google Docs and Prezi that they are likely to use in college and later in the workforce.

**Biographies**
Rob Sparks has taught Social Studies at Skyview High School for 23 years. He has been in education for over 25 years both in the classroom and coaching various sports at all levels.

Greg Zorbas is a teacher of world history at Kenai Central High School which is located on the Kenai Peninsula about one hundred and fifty miles south of Anchorage, Alaska. He has been in education for over 20 years both in the classroom and coaching various sports at all levels. Greg has presented at many conferences and spoke leaders in education around the world. Greg was recently recognized as the Alaska Society for Technology in Education 2014 teacher of the year.

Eight years ago Greg, Ron and Gregory Weissenberg (then Soldotna High School and now retired) created a concept they call Classroom Without Walls (CWOW). They began using video conferencing technologies to share content and have their students collaborate on projects. The CWOW program has evolved into a team teaching classroom in which Rob and Greg co teach from their respective schools to create a single classroom. CWOW has also evolved into student lead collaboration and is leading the way in innovative student collaboration using video technology. The CWOW program uses 21st century technology to enhance the curriculum and engage students.

Greg and Rob have 20+ years of teaching experience and have completely changed how and why they teach. Their efforts have been recognized on the local, state, and national level as an innovative 21st century approach to education.

**KEYNOTE 4**

**Title**
BYOV-Connecting Students Globally with Video Everywhere

**Presenter**
Jan Zanetis
Chief Executive Officer, CILC

**Abstract**
Virtual Collaborative Exchange – Through Interactive Video Conferencing
We often hear that we should be teaching our students how to interact and collaborate with their peers across different countries, background, cultures and practices. Indeed, the global citizens and the workforce of the future require employees that are adept with team problem solving through multi-cultural experience and collaboration skills. Using high speed bandwidth and Interactive Video Conferencing (IVC) students across the globe are practicing these types of skills while covering the national curriculum.

The objectives of a Collaborative project might include:
- Providing an opportunity for students of different states and countries to interact and learn about the different geographical features, cultural and social distinctions and tourist attractions.
- Students experience and debate the different perspectives for common social and economic topics.
- To provide an effective platform where students will be able to interact and engage freely, in real time and to learn through collaborating and sharing of ideas, views and information between geographically dispersed groups of learners.
- To share differing perspectives on a common learning standard/objective or provide information on that lesson with peers.

**Global Resources**
Collaborations Around the Planet (CAP Space)
Global Nomads Group
E-Pals
CILC Collaboration Centre
Taking IT Global
Global SchoolNet

**New Tools for Connecting**
Today, it is unnecessary for a school or content provider to purchase expensive h.323 IVC equipment. Many computer-based solutions are now at a point that the quality is just as good as h.323, especially when adding a couple of peripherals to your computer. We will discuss some of the best of these new solutions.

**Biographies**
As an educator and university administrator, Jan Zanetis spent 20 years in K-12 and Higher Education. In 2005, she moved into the corporate sector as an education specialist (first for TANDBERG and then Cisco Systems based in Australia). In August, 2013, she began her current role as the Chief Executive officer at CILC, a not-for-profit that serves educators, learners and content providers. Jan’s area of expertise is the application of video technologies in education. She has written extensively on this topic for education journals and has co-authored two books. Jan is an active member of several professional organizations including the International Society for Technology in Education (ISTE), the United States Distance Learning Association and the Consortium for School Networking. She often presents at educational conferences, regionally, nationally and internationally. Jan most recently joined the ISTE Board of Directors as a Member at Large serving a three-year term.
Remote access to scientific equipment located at research institutions has the potential to transform high school science education around Australia. By providing online access to scientific equipment, we can bridge the gap between secondary and tertiary institutions and expose secondary students to the current, exciting questions in science.

The Freely Accessible Remote Laboratories (FAR Labs) is an online platform allowing high school students to control and interact with scientific equipment housed at three major Australian universities, through their web browsers in the classroom or at home (www.farlabs.edu.au). For example, students from anywhere in Australia can conduct experiments with radioactive materials by controlling robotic equipment whilst viewing live video feedback. The data gathered from research equipment (which might be thousands of kilometres away) can be downloaded and analysed as a class activity. This platform obviates the need for high school labs to continuously update and improve their equipment and provides a safe environment for experiments that utilise dangerous resources.

Designed in direct consultation with active high school teachers, the FAR Labs program provides a unique educational experience while aligning itself with the current trend of e-teaching resources and materials. Moreover, the modular nature of the system, allows it to be easily expanded as further pieces of scientific equipment become available.

**Biography**

Dr David Hoxley is a physics lecturer at La Trobe University. His research interests revolve around semiconductor crystals (particularly diamond) and how they react to the world around and within us. This research involves coating crystal surfaces with organic and metallo-organic thin films to change their electrical and optical properties, so that they can be used for engineering implantable bio-sensors for monitoring blood levels in immuno-compromised patients. He is strongly motivated to improve the quality of life for patients requiring long-term chemotherapy through his personal experience.

David has a deep commitment to the dissemination of knowledge through teaching, which he sees as a process of coaching (albeit at varying scales) in a mass education system. He is finding ways to provide this coaching by combining modern educational psychology with information technology. He is using iTunesU for both a wildly popular freshman physics course and as a platform to collaborate with other scholars teaching postgraduate units on Atomic Force Microscopy and Synchrotron techniques. In all this, David is for both a wildly popular freshman physics course and as a platform to collaborate with other scholars teaching postgraduate units on Atomic Force Microscopy and Synchrotron techniques. In all this, David is

**Abstract**

Blended learning is growing in popularity. In particular it addresses issues of regional and rural schools in relation to specialist teacher access and broadening of curriculum offerings. Exactly what does connecting your classroom entail and how might it impact on your classroom delivery? Discover a range of pedagogical strategies and tips for using video conferencing effectively. View a wide range of curriculum models and examples from recent practice and delivery. Discuss the essential keys to engagement and success. This session features actual video clip examples from a wide range of curriculum areas P-12. Teachers who might be delivering this way for the first time and experienced practitioners will find this workshop of interest.

**Biographies**

**Dr Myung-Sook AUH**. Currently Senior Lecturer in the School of Education at the University of New England (UNE) in NSW, Australia and Program Director of the Asia ConneXions program funded by the Australian Government through the Broadband-EOSS program, teacher educator and researcher in Creative Arts. Her qualifications are: PhD at Case Western Reserve University in Ohio, USA, 1995; M.Ed and B.Mus at Ewha Woman’s University in Seoul, South Korea in 1989 and 1986, respectively. Her Asia ConneXions project established high definition video conferencing for thirty Australian schools with schools in Korea, Japan, China, Indonesia, and India for Asian languages cultures exchanges. Currently 63 Australian schools in VIC, NSW, TAS, WA, QLD, and TAS are participating in the Asia ConneXions. She has been at UNE since January, 2005. Before UNE, she taught at University of New South Wales (2000-2002), University of Technology Sydney (2002), and University of Western Sydney (1999). She was a Research Fellow in the Centre for Research and Education in the Arts in the Faculty of Education at UTS in 1999.

**Exploring Pedagogy for Video Conferenced Classrooms**

**Jo Tate**

Senior Project Officer Vic. Virtual Learning Project and

**Myung Sook AUH**

Senior Lecturer UNE
SHOWCASE 1

Title
Asia Connexions & Project VAMPtv

Presenters
Anyang Shingi Elementary School
Korea
Higurashi Elementary School
Tokyo
Andy Mison
Principal, Northern Territory Music School and Executive producer, VAMPtv

Abstract
Anyang Shingi Elementary School in Korea and Higurashi Elementary School in Tokyo will be participating in a short international school concert to the audience in the Sydney Opera House Utzon Hall. A school concert with a difference! Live from Japan and South Korea we will be entertained by the students of these schools. The concert is organised through the wonderful Asia Connexions Project.

Our Japanese and Korean partner schools are looking forward to hearing about the innovative and successful VAMPtv involving indigenous Australian students in an engaging and collaborative approach to music education.

VAMPtv is a television program broadcast securely online through the NT Schools satellite and terrestrial network. VAMPtv supports improved education outcomes for Indigenous students, mainly through a focus on engagement and participation in the performing arts. Established in 2011, 47 episodes have been produced to date, each accompanied by teacher's notes linked to curriculum. Over 80% of remote NT schools have contributed content, and many thousands of views are recorded for each episode. The presentation at ITEC will offer a background and rationale for the project, an explanation of the unique and innovative combination of platforms that comprise the program package, a practical demonstration of VAMPtv with video excerpts from the program itself and an outline of future prospects.

Biography
Andy Mison is the Principal of the Northern Territory Music School and Executive Producer of VAMPtv, with a background as a music educator and professional musician. He has designed and implemented music technology programs and professional learning for secondary schools in the NT and developed Australia's first online primary school music course for remote Indigenous schools ‘Earth Music’. Andy is a member of the APRA 'Songmakers' National Advisory Group, and was recently a member of the ACARA writing team for Music in the Australian Curriculum. He is Chairman of ASME NT and is a member of the Australian Secondary Principal’s Association.

SESSION 3

Title
Creating Student Engagement in Video Conference Lessons

Presenters
Ben Newsome
Science Educator & Founder, Fizzics Education

Abstract
You've got the video conference system and you've done the training... so what next? This session looks at how to create engaging distance lessons that learners will actually care about. During this presentation we will look at:

- Lesson design in a virtual environment; what works and what doesn't.
- Incorporating genuine interaction between multiple sites, without destroying your lesson structure.
- Engaging audiences with hands-on materials whilst keeping the participants focused.
- Tips and tricks with educational video conferencing; keep it simple!

With planning and a strong focus on student learning outcomes you can run rich and rewarding distance workshops with any audience, anywhere.

Biography
Ben Newsome is the founder of Fizzics Education and co-founder of Virtual Excursions Australia. A qualified teacher and science outreach specialist, his company reaches over 120,000 students each year via incursion and video conferences across Australia and around the world using traditional codec systems and BYOD H.323 technology. Between May and July this year Ben visited 16 cultural institutions in North America as part of a Winston Churchill Fellowship looking at best practice in science education via video conference. fizzicseducation.com.au twitter.com/BenNewsome
Innovation in Collaboration

Sue Beveridge  
National Education Advocacy Manager, ELECTROBOARD Solutions

This presentation will share the latest in collaboration technologies and provide case studies of practice. It will illustrate how the integration of existing technologies can enhance collaboration and how bespoke tools are being developed. Collaboration is a key 21st century skill but understanding how it can be implemented and assessed is still an emerging area. The presentation will provide examples of practice enabled by innovative technologies and current work being undertaken in international and national settings. It will for example describe the outcomes of a project undertaken by the “Coalition of Knowledge Building Schools” which focused on the research of Michael Fullan and how this was understood by students across multiple school sites.

Biography
Sue Beveridge has been an educator for more than 32 years with a strong focus on innovation and learning. She has served in education as a Head Teacher of English, Senior Project Officer English K-12 and Literacy Curriculum Adviser, Chief Education Officer and Assistant Director of the NSW Department of Education’s Centre for Learning Innovation, and Education Outcomes Business Change Manager for the Connected Classrooms Program. As a Senior Officer in the Nation’s largest department of education with an enrolment of over 1.2 million students, Sue delivered change strategies for key educational transformations, including the NSW Literacy Strategy (placing literacy as a key focus for all teachers), the new Higher School Certificate (introducing standards based assessment), the Priority Action Schools Program (focusing on Quality teaching in low SES schools), TaLe (the Department’s Teaching and Learning Portal with more than 22,000 digital resources) and the Connected Classrooms Program (connecting 2250 NSW public schools via interactive whiteboards, video conferencing, data collaboration and social networking tools).

Sue is a Member of the Australian College of Educators (MACE) and the Australian Council of Educational Leaders (ACEL). She has led educational research and written widely, including her current blog: http://interactivewhiteboardnetau.wordpress.com/ Sue has presented at conferences both internationally and nationally, including the British Education Research Association (BERA), the CoSN International Conference, Washington 2010, the International Middle Years Conference 2009, the IDEA 2012 Conference, Stronger Curriculum Adviser, Chief Education Officer and Assistant Director of the NSW Department of Education’s Centre for Learning Innovation, and Education Outcomes Business Change Manager for the Connected Classrooms Program. As a Senior Officer in the Nation’s largest department of education with an enrolment of over 1.2 million students, Sue delivered change strategies for key educational transformations, including the NSW Literacy Strategy (placing literacy as a key focus for all teachers), the new Higher School Certificate (introducing standards based assessment), the Priority Action Schools Program (focusing on Quality teaching in low SES schools), TaLe (the Department’s Teaching and Learning Portal with more than 22,000 digital resources) and the Connected Classrooms Program (connecting 2250 NSW public schools via interactive whiteboards, video conferencing, data collaboration and social networking tools).

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From Bennelong Point to the Nation: Bringing the arts to regional communities through video-conferencing

Bridgette Van Leuven  
Head of Children, Families & Education, Sydney Opera House and Dr Rachel Perry  
Australian Centre for Child and Youth, University of Technology, Sydney

The use of video conferencing as a means of connecting and engaging students is continuing to increase in prominence across the education sector. The performing arts poses a unique challenge for this form of interactive technology and one that is being addressed within the Sydney Opera House Broadband Enabled Digital Education Program: From Bennelong Point to the Nation. An overview of the program will be provided in this presentation alongside the identification of key challenges and lessons learned. Preliminary findings will be considered from the perspective of multiple stakeholders including the session facilitators/artists, organisations developing digital engagements as well as teacher and family participants. Implications for session design and structure when presenting a live, interactive performing arts program, the role of pre and post session connections as well as associated pedagogical approaches will be discussed along with what this means for educators, artists and arts organisations.

Biographies
Bridgette Van Leuven began her arts career at the Australian Theatre for Young People where she discovered the important role arts education and creativity plays in a young person's development. A graduate of Wollongong University, with post graduate studies from City University, (London) Bridgette has also worked for Sydney Festival and Sydney Theatre Company. Her time at Arts NSW saw Bridgette working in roles such as the Program Manager for Theatre & Dance and Youth Arts Development Officer. In 2010 she accepted the position of Head of Children, Families & Education at Sydney Opera House where she and her team are passionate about making the 'House' accessible onsite, offline and online. Bridgette was a recent Board Member of Critical Stages and is the Chair of the Helpmann Awards Children's Panel in 2014.

Dr Rachel Perry has been working in Education and the Arts for almost 20 years with experience in schooling, government and tertiary environments. Rachel has a particular passion for teacher professional development in the arts especially as it can be mediated through technology and what this means for those located in disadvantaged, rural and remote communities. Recent research has focused on teacher development in drama as well as facilitated action learning as a process to support schools and organisations. Rachel is currently working in the Australian Centre for Child and Youth: Culture and Wellbeing at the University of Technology, Sydney. She is exploring possibilities of the connected classroom (video conferencing) as a means of connecting and supporting student learning and what this means for the teaching and learning process in schools and universities.
**Title**

Building Global Classrooms with Asia

**Presenters**

Jo Tate
Senior Project Officer Vic. Virtual Learning Project and
Myung Sook AUH
Senior Lecturer UNE

**Abstract**

Thinking of making curriculum connections into Asia? Share journeys currently underway in Australian schools reaching out to Asia for curriculum collaboration. Understand the relevant programs, tools and avenues available to you when developing Asian global citizenship for your students. This presentation will explore the Asia ConneXions Project, the Asia Education Foundation, and the work of the Vic Virtual Learning project in this space.

**Biographies**

Working with P-12 schools in the implementation of global classrooms and video conferencing for over two decades, Jo Tate has presented at many international venues. Many of her projects’ initiatives have won National and International awards and recognition including the Childnet International Award, the Stockholm Challenge Award, and the Herald Sun Technology Teacher of the Year Award. She was named as a finalist in the Bulletin Smart 100 – Education category.

Dr Myung-Sook AUH. Currently Senior Lecturer in the School of Education at the University of New England (UNE) in NSW, Australia and Program Director of the Asia ConneXions program funded by the Australian Government through the Broadband-EESS program, teacher educator and researcher in Creative Arts. Her qualifications are: PhD at Case Western Reserve University in Ohio, USA, 1995; M.Mus at University of Akron in Ohio, USA, 1991; M.Ed and B.Mus at Ewha Woman’s University in Seoul, South Korea in 1989 and 1986, respectively. Her Asia ConneXions project established high definition video conferencing for thirty Australian schools with schools in Korea, Japan, China, Indonesia, and India for Asian languages cultures exchanges. Currently 60 Australian schools in VIC, NSW, TAS, WA, QLD, and TAS are participating in the Asia ConneXions. She has been at UNE since January, 2005. Before UNE, she taught at University of New South Wales (2000-2002), University of Technology Sydney (2002), and University of Western Sydney (1999). She was a Research Fellow in the Centre for Research and Education in the Arts in the Faculty of Education at UTS in 1999.

**Showcase 5**

**Title**

Apps, Digital Studios, Robots and Water Policy. What’s the connection?

**Presenters**

Robert Bunzli
Special Projects Manager, Education
Will Inveen
Director of Education Murray-Darling Basin Authority

**Abstract**

Effective management of the water resources of the Murray-Darling Basin (MDB) has never been more critical to Australia’s future. The MDB is one of the driest major river basins in the world, yet it is Australia’s food bowl, producing over 40% of our agricultural produce. Two million people live in the Basin and over three million people drink water from it. Extensive environmental assets, economies and communities are depending on effective management of its water resources for a sustainable future.

The education@MDBA program uses multiple digital platforms and associated enabling partnerships with national institutions to overcome some of the significant challenges it faces in facilitating educational experiences related to MDBA’s work. These challenges include reaching the diverse and often remote stakeholder audiences over an area of more than one million kilometres squared, connecting communities to discuss shared water based issues, and making water management an appealing topic and career choice to young audiences, our river managers of the future. The projects which will be discussed involve digital videoconferencing, a telepresence robot and a recently released smart device app.

**Biographies**

Robert Bunzli is the National Museum of Australia’s project manager for the Mobile Robot Telepresence Education Program - a joint project with CSIRO and the Department of Broadband, Communication and the Digital Economy. He is actively seeking interested schools, libraries and community groups to try out the system – which is now open for business.

Will has a background in the digital delivery of interactive education using multipoint video conferences and web streaming through his previous role as Production Manager for Digital Outreach at Questacon. Will Inveen is the Director of Education at the Murray-Darling Basin Authority. He has a university background in science (resource and environmental management), education (secondary science and SOSE) and scientific communication. He has delivered science education and capacity building programs in metropolitan, regional, remote and indigenous communities in Australia and 16 countries internationally. He has run an environmental education centre in the ACT, worked as a secondary classroom teacher and run a private science communication business. Throughout his career Will has used collaborative ventures and partnerships to enable the development and delivery of innovative programs. Examples of digital programs he has been involved with include using a blog and live chat events to connect an Antarctic scientist with school students, working with Questacon to deliver a video conference based program and one off events, and the development of a smart device simulation app Run the River, where players to try their hand at managing river flows and allocating water to consumers.

Will is currently working with staff at the National Museum of Australia to develop a program using their telepresence robot that examines the social, environmental and economic aspects of water resource management in the Murray-Darling Basin.
Abstract

The World Savvy 2012 Global Competence survey showed that 60% of those surveyed (aged 18-24), believed they would be better employees if they had a stronger understanding of world cultures.

We live in such a globalised world, part of our mission should be to ensure that every student feels more confident and able to live in that world. Using technology to connect our students and promote tolerance and an appreciation of different beliefs, cultures and backgrounds, as well as giving them an understanding of emerging jobs and industries can help students engage with their peers, contribute to their community and take their place in the world.

Teaching core subject matter combined with 21st century global knowledge, skills, and attitudes is important. In an environment where the internet and social media play an increasing role in how our students interact and learn outside the school environment, it is important that educational systems and classroom teachers begin the journey of combining these two demands.

This presentation will focus on three alternative projects that demonstrate how students at Knox Grammar School have collaborated, discovered and learned with classes from the United States, Korea and Australia. Various technologies such as video conferencing, Wikis, Skype, Google Hangouts plus the gaming phenomena Minecraft will be discussed and explored. Participants will see short video clips and samples of student work.

This presentation is designed to demonstrate how technology can move learning beyond the classroom and how digital tools can be used to transform the way students comprehend, collaborate, access and acquire learning in a modern day environment.

Biography

Michael Beilharz is a teacher and the ICT Coordinator at Knox Grammar School in Sydney Australia. Knox is an Independent Boys school running a laptop program and Michael works closely with all teachers K-12 integrating technology throughout the curriculum. Michael is a Google Certified Teacher and has presented at conferences throughout Australia and overseas. He has worked at various independent and government schools in his 20 years of teaching.
KEYNOTE 5

Title
Bringing Experts and Industry into London Classrooms: Using secure, interoperable VC connections

Presenter
Mina Patel
Director Video Conferencing for Learning

Abstract
National Award Winning Schools from the London Borough of Redbridge will showcase and discuss how they have been using secure, interoperable VC connections to bring Experts and Industry into their classrooms. The teachers and pupils will discuss how they have been developing international partnerships and using content providers to enrich and broaden curriculum opportunities.

Biographies
Mina Patel, is the Director of Video Conferencing for Learning. Mina work as a consultant for the Schools IT unit in the London Borough of Redbridge. Mina is a former teacher of secondary science and worked for many years in teacher training through use of ICT. She writes a blog (vcfl.net) showcasing the use of VC in education and most recently, Mina has written a report in 2012 for Janet (UK) highlighting the need for more VC content and partnership opportunities for education across the UK.

Alongside Mina there will be a panel of speakers who work with her in Redbridge:

Gary Jelks, Manager of the Schools IT Unit at the LB of Redbridge. He has been leading on implementing VC across his schools for many years.

Kulvarn Atwal, Head Teacher, and Alison Seagrave, ICT Specialist Teacher, at Highlands Primary School. National Janet Award Winners, 2013, for the use of VC in teaching and learning in the Primary Sector.


KEYNOTE 6

Title
The Nautilus Exploration Program: Real-time participation in ocean exploration expeditions

Presenter
Lloyd Godson

Abstract
The Nautilus Exploration Program was founded in 2008 by Dr. Robert Ballard and is operated by the Ocean Exploration Trust. Our international program centres on scientific exploration of the seafloor launched from aboard Exploration Vessel (E/V) Nautilus – a 64-meter research vessel equipped with Remotely Operated Vehicles, Mapping Systems and Telepresence Technology. In addition to conducting scientific research, the Nautilus Exploration Program offers its expeditions to explorers on shore via live video, audio and data feeds from the ship.

We bring our audience cutting edge exploration, live from the bottom of the ocean as we explore landscapes that have never been explored before. We also bring educators and students of all ages aboard E/V Nautilus during expeditions, offering them hands-on experience in ocean exploration, research and communications.

All of the video and data that we collect is transmitted via satellite to the Inner Space Center, located at the University of Rhode Island Graduate School of Oceanography, where Dr. Ballard is a professor of oceanography. From this “mission control,” our video feeds from the ship and under the sea are broadcast live on the internet so that anyone in the world can join our Corps of Exploration from home and be a part of the exploration in real-time. By partnering with organisations such as JASON Learning, our Corps of Exploration are able to connect the next generation of explorers, scientists, engineers and educators with inspirational STEM role models, cutting-edge research, award-winning in and out-of-school curricula and real science and exploration.

Biography
loyd Godson is an ambassador for ocean exploration committed to encouraging more young Australians to undertake STEM (science, technology, engineering and maths) studies and careers. He loves to live his wild ideas by putting them to the test in the real world, sharing the excitement of exploration and adventure with students and public audiences around the world. He has spent a total of one month living underwater, propelled himself through the Greek islands in a human-powered submarine and holds the Guinness World Records for the most electricity generated by pedalling underwater. In 2007, Lloyd received the coveted Australian Geographic Adventurer of the Year award. In 2013, he launched a new educational initiative called ‘Tik and Bubbles’ which designs community-based science projects that are creative, collaborative, challenging and fun.

Most recently, Lloyd has been selected to participate in the Nautilus Exploration Program as an Ocean Exploration Trust Science Communication Fellow (SCF). The SCF Program immerses formal and informal educators in the Nautilus Corps of Exploration and empowers them to bring ocean exploration to a global audience via the Nautilus Live website. Fellows share accounts of ocean science, expedition operations and daily life with audiences through live audio commentary and question-and-answer sessions from aboard Exploration Vessel (E/V) Nautilus. From July 27th to August 16th 2014, Lloyd will participate in an expedition to the Mesoamerican Reef. Through live interactions with student groups and public audiences, he'll engage people of all ages in real-time ocean exploration.