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AUSTRALIAN CENTRE FOR THE ARTS & TECHNOLOGY (ACAT)

**Submission to the House of Representatives Standing Committee on
Communications, Information Technology and the Arts
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Australian Centre for the Arts and Technology response to the inquiry into the future opportunities for Australia's film, animation, special effects and electronic games industries.

ACAT has a strong computer music element, therefore, we have included comments that feed into the overall context of this submission.

Background

ACAT was established in late 1989 as a Centre in the Canberra Institute of the Arts (now National Institute of the Arts at the Australian National University) for teaching, research, recording and publishing of music and dynamic visual arts made with new technology. The Centre was the first of its type in Australia, with links to similar centres around the world. Its aim was to provide a unique environment for the study, research and artistic use of computers and its focus on multidisciplinary education of composers and visual artists interested in using new technologies as expressive tools.

In 2000 the BA Digital Arts program was proposed and created in 2001, reflecting the need for an undergraduate degree which with today's growing advancement of technology and the development of new media industries, convergence and experimentation of digital artists brought new and collaborative direction into the Centre.

The Australian Centre for the Arts and Technology (ACAT) within The National Institute of the Arts has developed on many fronts over the past few years and has gained international recognition for the excellence of its Digital Arts and New Media Arts & Technology programs. ACAT provides a unique environment in Australia for the artistic use of computers and a focus on interdisciplinary education for artists interested in exploring the potential of new technologies and new media.

Today, ACAT is still a centre dedicated to creative applications of new technology and artistic practice offering studies in new digital sound and image technologies but with both undergraduate and postgraduate level. Our primary concern is in encouraging new and creative approaches to working in digital image and digital sound and exploring interactions between these. The Centre is concerned with the aesthetic implications of new and emerging technologies and new environments are explored with emphasis on the production of new works. This motivates software and hardware research which focuses on the design of new computer-based methods for composing and integrating sound and visual images in real-time and in 3D space.

ACAT places great importance in preparing students for an active role in the Arts Community, as well as maintaining links with the expanding film / video, music and animation industries. Special focus is given on exploratory techniques - especially those that involve the use of the computer in the direct implementation of ideas through software.

Research at the Centre covers a wide range of disciplines, which have application in the creation of works in new media. Staff regularly exhibit and perform works in a variety of contexts, spaces and locations. Activities in the Centre include, research, exhibitions, festivals, recording, publishing and performance of new media and time-based arts. ACAT's interdisciplinary pursuits within the arts and the sciences associate it with other academic and artistic centres through Australia and around the world, our success is shown through the achievements of staff and students research and their arts practice.

(a)   the current size and scale of Australia's film, animation, special effects and electronic games industries:

Digital Arts is arguable the most popular artistic direction and hugely in demand to gain university and TAFE places. Already there are a fast growing number of university educational programs focusing on animation and other new media. We already have are a large number of skilled and talented animators in Australia and this is clearly evident at the various international film festivals featuring Australian works.

Also, electronic and computer music in Australia is a vast and growing sector of the Australian music scene. Its growth has largely been based on advances in computing technology, data storage, the internet and significant social changes in the cultural reception of new music. It is therefore a youth culture market. The combination of these factors has created a "hot-house" environment in which a plethora of musical genres have flourished. No other musical context and genre has such a clearly defined claim over the future of music and an unbridle optimism for its production. This is also a worldwide phenomenon and Australia's music is and must continue to be part of it.

The extent to which this music is part of our cultural landscape can be seen in a many of areas: the number of recordings released each year, the number of musical events organized for public dissemination, use of the music in advertising, fashion, television, film, dance and performing arts, sales of computers, electronic music production systems, CD/DVD systems, and finally not to forget the growth in educational services for aspiring musicians and performers. Indirectly, digital technology influences all music in the 21st Century.

It is also a context that is rapidly changing because it is predicated on emerging technology.

(b)   the economic, social and cultural benefits of these industries;

Developing Australia's identity is important. DVD / CD sales, festivals, concerts and film screenings and the general engagement of young people in digital arts has been well documented in various industry sources. The other less known industry area is home-grown technology. This is a support area for practitioners and involves many people with technology skills that help to create a distinctly Australian identity in digital film and music. Individuals can be characterized as having specialist skills tailored to particular areas and needs and an entrepreneurial disposition. These individuals need more recognition and assistance, as they tend to receive little support from government arts organizations.

(c)   future opportunities for further growth of these industries, including through the application of advanced digital technologies, online interactivity and broadband;

It is clear that digital arts practice and technology has a future that is based on imagination and technological development. As long as both exist, creativity will drive industry growth. In turn, creativity requires an outlet. Today's online interactivity and broadband connectivity provides innovative education learning opportunities, community engagement, fast delivery, interaction and competitive production.

(d)   the current and likely future infrastructure needs of these industries, including access to bandwidth;

Local infrastructure is first of all controlled by economic returns from the immediate environment. It is a logical and inevitable starting point. It also has a limit. Increasing infrastructure for production and dissemination must come from the ability of artists to find new markets beyond Australia. The most realistic way to do this is through the internet. If Australian artists are to compete in the global market place, they will also need to increase their creativity and gain a global identity. Therefore a need exists to provide an infrastructure that facilitates this.

Building a national grid of knowledge networks, digital culture and education portals, would enhance Australia's national identity and cultural exchange. In education, curriculum at all levels could be supported within the infrastructure, including links to major arts organizations, cultural institutions, the National Library and well as the creative industries.

(e)   the skills required to facilitate future growth in these industries and the capacity of the education and training system to meet these demands;

At the Australian Centre for the Arts & Technology, Digital Arts is for students who want to participate in the contemporary arts, music and new media professions, with the intellectual and practical skills to contribute and compete successfully. They demand a rich and varied context in which the individual has the opportunity to grow and experiment intellectually in order to be involved in the trans-national visual and technological future.

In ACAT specialist streams are Computer Animation, Interactive Multimedia, Digital Video and Computer Music. Throughout courses an emphasis is placed upon skills development, so that students acquire and develop skills of analysis, reasoning and communication essential to practice. Support is also given to allow students to develop their own practice and to understand and evaluate the methodological and theoretical questions that inform practice.

The animation industry tends to be cyclical. Employment is generally on a project by project basis. A graduate looking to enter into the industry will do better if they have a comprehensive skill base, so they are flexible enough to move across different types of productions. The industry does not require a large number of technicians. It is more beneficial to have employees who are educated in the media, with an arts grounding. Education plays such a vital role and ACAT contributes to this in developing some of Australia's very best students ready to take these challenges on.

There is a gap between the highly skilled and talented university graduate and the competent industry professional, this often requires years of industry experience for the top industry jobs. To increase skill levels, and more resources (teaching and technology) are needed to make available to institutions.

It is vitally important to have highly skilled people coming from University courses such as the BA (Digital Arts in ACAT) and thus funding should be directed to Centres for the express purpose of targeting industry. We desperately need higher level equipment and with this will also come research, but current funding models don't give the education sector of this industry a fair go.

Australia has proven in the past its capability for excellence in these areas and we are in a position to foster these traditions and explode onto the world scene creating and constructing world class products, we just need the funding.

(f)   the effectiveness of the existing linkages between these industries and the wider cultural and information technology sectors;

Commercial industry linkages are generally profit driven and come into effect after there is a perceived financial return, usually from artists. It is always extremely difficult for artists/producers to know what their market is in advance. Even if there is a market, success is by no means predictable. The closest one can get to predict success is through heavy promotion. This is not something available to emerging artists and their art forms.

Also, industry has a tendency to homogenize culture in order to maximize the commercial potential.

The culture sector operates largely independent of concerns of financial return and must always do so to be in a position of relevance to society. In its attempts to maximize its cultural power, it relies on information technology to facilitate communication of its statements. Here there is a curious relationship between commercial availability of technology and creative production.

Prior to financial independence, the digital arts context must be given freedom to produce the artistic directions of the future.

(g)   how Australia's capabilities in these industries, including in education and training, can be best leveraged to maximize export and investment opportunities;

Since digital arts are still an emerging educational area, it is not receiving the resources and attention it needs. To often it is tucked away in a broad arts education context and carefully avoided. Digital arts in general needs a higher profile and representation in general arts education.

As mentioned above it is all about being part of the future and that is dependent on new technology, education for that technology and creative output from that technology.

It is expensive in educational terms but the returns can be equally impressive and there is the fact that the area is growing and requires increased educational resourcing.

In education, there is already an understanding of high standards in Australian digital arts and more international students are coming to Australia to study. ACAT has 70% international students enrolled in its New Media Arts & Technology postgraduate program and 40% undergraduate students. In educating our international students to such high standards provides future opportunities to advance our connections and reputation internationally.

(h) whether any changes should be made to existing government support programs to ensure they are aligned with the future opportunities and trends in these industries.

It is a widely held belief that government support for creative programs is far less than it should be and that it should be across a spectrum of activities from education to industry. This is clearly a huge task to do right.

Industries generally, support small companies in Canberra for producing film and video products in advertising and government work but there is little infrastructure and slow progress for development of the creative industries. Canberra has potential and the expertise to generate these industries backed by government support and linked to the high quality education institutions of ACAT (ANU), University of Canberra, CIT and the Academy of Interactive Entertainment.

The Australian Centre for the Arts & Technology
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<u>ACAT Alumni Response – Paul Kirwan</u>

Paul Kirwan is an alumni of ACAT, last year we invited him back to Canberra to feature in the Australian Science Festival and to give two public lectures in regards to his career, working as a compositor in the special effects film industry. We asked him to contribute to this submission:

(I have little experience with the games industry so I will address my comments to the film and special effects industries).

Do you have a view on Australia's film, special effects and electronic games industries?

Australia's film and special effects industries are highly regarded in the broader scope of the film / effects world. We are known to produce great work, and one of the great advantages of Australia at the moment is that, due to the currency conversion, we can produce the same work cheaper than it can be done in America or Europe. This similarly applies to New Zealand - hence the recent success of Weta with its two Academy Awards for visual effects. (In fact the "Lord of the Rings" trilogy would never have been made if New Line Cinema could not have taken advantage of the lower production costs of making the trilogy in New Zealand, not to mention the generous tax breaks and other advantages provided by the New Zealand government.)

The main drawback to the film and special effects industry in Australia seem to me to be the availability of work. The nature of the industry is such that 'effects-heavy' movies, TV series and commercials are much more expensive to make than more narrative pieces, and so less of them tend to be made. Only a large and dynamic film industry (i.e. Hollywood) will make enough films at any one time for any of them to be 'effects-heavy'. Of course, this is only the top of the bell curve; the vast majority of films, TV and commercial work, while not being entirely dependant on fancy effects, will still have varying number of effects shots in them. So the amount of work available is obviously a function of the size of the industry, and since Australia's film industry is relatively small, there is less work for local effects companies; hence it is harder for these companies to stay in business.

This is not to say that 'bigger is better', but merely has to do with the amount of work available at any time. Australia has traditionally dealt with this issue by attempting to bring work to Australia from overseas, mainly from America and Southeast Asia. Clearly the success of this strategy depends on many things, including the strengths of these countries economies, and competition from local vendors. Again our reputation for high quality work, creativity, and value-for-money helps greatly in this regard.

The cyclic nature of the industry means that often there is not enough work to go around; this tends to produce a 'boom or bust' effect, where there is either so much work that companies cannot find enough qualified people, or where there is not enough work to keep people employed. This cycle is true of most industries but is exacerbated in the film, TV and commercial work by the project nature of the work. This cycle is the same all over the world but it is made more difficult in Australia due to the small size of the industry.

So one of the main problems confronting Australia, like so many things, is size. Because there is such a larger industry overseas, it follows that, while competition is greater, there is also more opportunity. And, because the smaller Australian industry is often merely fighting to survive, we do not always have the opportunity to create world-class, top-shelf creative facilities in Australia. As a result, a lot of our best people go overseas to pursue the opportunities available there. This 'brain drain' is well documented in a number of areas but seems to me to be worse in the film and special effects industries because of the highly specialised technical and artistic nature of the work.

The only way around this 'brain drain' is to provide assistance and opportunity to local Australian industry, to help us create truly world-class facilities and a dynamic and exciting industry. True, we will never be as 'big' as Hollywood, but if more opportunity was available at home, less people would be tempted to leave for greener pastures.

In particular, the introduction of new technologies and maintaining studios and facilities at current world `best practice' standards

I'm not quite sure how to address this point. The introduction of Fox Studios has certainly helped to bring work to Australia, but while a lot of films are shooting there, most of the post-production (editing, sound, score and effects work) is being done back in America or Europe. More needs to be done in the form of incentive to try to keep this work in Australia. For every dollar spent shooting the film, many more dollars are spent on the post-production. Australia already has a reputation for having top-quality talent here (hence George Lucas choosing to shoot most of his last two "Star Wars" films in Australia, using mostly Australian crews). We need to go the extra step to make Australia a preferred location for post-production too.

Australian educational and training facilities and opportunities for aspiring directors, cinematographers, actors, technicians and artisans

Australia's educational facilities for filmmakers and those in allied industries again have a solid reputation, very much coloured by Australia's good reputation in the film industry. I can only really speak for the effects industry in terms of specifics, but my impression is that a closer relationship could exist between education and industry, with education providing graduates with more industry-specific skills, and with industry providing internships and greater opportunity for graduates. This would have the effect of producing better graduates as well as keeping more of this talent in Australia.

the likely effect of international agreements on the production, distribution and display of Australian films and the ongoing development of an Australian voice in film

I will use as an example the "Lord of the Rings" trilogy currently being completed in New Zealand. This enormous film undertaking would never have been done without general tax breaks and numerous other incentives from the New Zealand government. The trilogy has brought incalculable benefits to New Zealand, from a large amount of funds for the completion of the film, to the advancement and development of local industries (both the film industry, and the things that support it, from supply companies to restaurants and cafes), as well as tourism and a general raising of people's awareness of New Zealand.

Certainly the film is a travelogue of the country; people are flocking to "Lord of the Rings" tours of the locations where the film was shot, and tourism has skyrocketed.

Here is an example of how a relatively small investment on the part of the government has produced a much greater return for the country as a whole. While I cannot pretend to be an expert on the mechanics of government this sort of incentive could similarly bring benefits to Australia out of proportion with the cost of the investment itself.

Incentives such as this could only be good for the Australian film industry. We already have an "Australian voice" in film, and our films are well regarded overseas. We just have to find a way to make these opportunities available to more budding Australian filmmakers, and to keep the talent here in Australia once they have become successful.

National and international marketing of Australian films / Fostering the development of Australian content, as well as co-productions.

I would not be able to provide any ideas, other than that of a layman, as I have no experience in the fostering of Australian content, marketing, et al. Certainly, Australian films have a fantastic reputation overseas for originality, freshness and for taking subjects that Hollywood never would. All effort needs to be taken to foster this sense of difference and originality, to encourage filmmakers in Australia to continue this tradition. Moviemaking is an inherently expensive operation but the benefits, both financial, educational and cultural, cannot be overstated.

<u>**ACAT focused:**</u>

Why didn't you stay in Canberra / Australia?

I was offered a job with one of the world's top effects facilities. Nothing like it was available in Australia. Similarly, upon returning to Australian after working in the States, I found it difficult to find work. In a sense I was overqualified – the experience I had was too specialised for the local market at the time. I succeeded by broadening my experience, but then the offer came to work on "Lord of the Rings", and this kind of work was not available in Australia. Since then I have travelled back to the USA to pursue similar opportunities here.

How was you study at ACAT appropriate to your career now?

ACAT taught me the theory and practice of computer animation, and about the software and hardware needed to accomplish it. I also learned about the creation of a story, from conceptualisation, through design to production, editing and music. All these things are relevant to my career and it was on the strength of my ACAT work that I received the initial job offer that was my break into the industry.

How can education feed the industry?

The industry is one that requires significant technical and artistic knowledge. It is very 'specialised' in that there is only limited crossover from other industries, and hence it is hard to get started in the industry without some sort of formal training. By tailoring courses to the needs of the industry, educational facilities can greatly increase the 'employability' of artists and technicians desiring to work in the industry.

What more do we need to offer?

Closer ties with industry, and a better knowledge of the skills that are required in the 'real world', would facilitate graduates more qualified to immediately enter into employment within the postproduction industry. Certainly courses could be offered with a focus on rotoscoping, paint fixes, wire and dirt removal, production methodology and the structure of the postproduction industry - knowledge that would assist in graduates being qualified for a number of 'entry-level' positions within the industry.

Does education and industry truly integrate?

Currently, my experience in Australia is that educational facilities go either of two ways: offering courses that are specifically tailored for entry-level industry positions, but that give no broader knowledge the art form, or the potential of the Digital Arts; or they offer diploma or bachelor degrees giving a much broader education of digital media, animation and design, but which are lacking in providing industry-specific knowledge that will help graduates find employment. Finding a middle ground between these two extremes would be a great advantage for both industry and education.

Clearly, the integration between education and industry is still not what it could be. Closer ties between the two areas is certainly possible, perhaps with programs such as internships, tours of studios and facilities, and providing students with the bio and contact information of potential employers.

My current position is 'Senior Compositor' with Industrial Light and Magic which is the effects company that does all the effects work for George Lucas and Steven Spielberg, having done the "Star Wars" films, the "Indiana Jones" series, "Jurassic Park", etc.
Paul 'Krusty' Kirwan
Compositor /