Submission to the

INQUIRY INTO THE FUTURE OPPORTUNITIES FOR AUSTRALIA'S FILM, ANIMATION, SPECIAL EFFECTS AND ELECTRONIC GAMES INDUSTRIES

HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON COMMUNICATIONS, INFORMATION TECHNOLOGY AND THE ARTS

BY
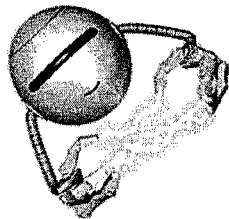
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MAY 2003

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Summary

This submission from the Academy for Interactive Entertainment (AIE) addresses the need for a national approach to building skills for the film, animation, special effects and electronic games industries. It supports and amplifies the joint submission to the same enquiry by AIE and Canberra Institute of Technology [CIT] but focuses more specifically on skills development for the Australian Games industry. The Cross Sector Training section quotes directly from the joint submission.

The electronic game industry is a significant contributor to the Australian economy. It is also part of a larger global entertainment industry (now bigger than film) and a major export industry. Export earnings are already impressive compared with other software sectors and the potential for delivering exponential growth in the next 3-5 years is huge.

This response draws on the experiences of AIE over a period in excess of five years. This represents a time that extends from when Electronic Games Development, in particular, was an emerging industry and no formal recognition was given to its existence or importance through to a period now where many training programs are springing up at all levels.

In particular it addresses the following sections of the inquiry:
   f)   *the skills required to facilitate future growth in these industries and the capacity of the education and training system to meet these demands;*
   h}   *how Australia's capabilities in these industries, including in education and training, can be best leveraged to maximise export and investment opportunities; and*
   i}   *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.*

AIE is Australia's largest specialist training organisation for the 3D graphics and Game Development industries. It is a founding member of the Games Developers Association of Australia and runs the annual Australian Games Developers Conference. It has effective partnership and sponsorship arrangements with Canberra Institute of Technology, [Faculty of Design] Sony Interactive Foundation, A.T.I. and leading games developers. It is currently state Small Training Organisation of the Year and has graduated over 400 students to industry since 1997.

This submission advocates the development of a national approach to Games Development and 3D Graphics training through:

-   A National Skills Council to encourage and manage:
    o   More responsive accreditation of courses
    o   More flexible cross sector training and education
    o   Quality assurance and best practice
    o   Funds for start up activity and innovative activity

-   An innovation fund to support to promote R and D within the context of real production activity, to establish meaningful incubator activity and to provide incentives for integrative skills development between industry and training providers

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Background

In Australia, the interactive computer games industry is a lesser known success story now exporting an estimated $30M AUD annually. One Australian company—Infogrames–Melbourne House—invested over $50M AUD last year in new Australian based production.

The Australian industry employs around 600 full time artists, designers and producers in about 40 firms. Industry estimates predict that employment could reach 2,000 within five years as Australian developers win more of the estimated $35 billion US spent each year on computer games. Experienced games programmers are currently very much in demand and the industry is very keen to recruit employees from more diverse backgrounds to join its development teams. Amongst principal employment targets are women.

Within the currently modest Australian market, research conducted by the Victorian Government indicates Australians now spend about $1 million a day on interactive computer games—about the same as they spend on movies.

Australian game developers typically export all or almost all their production to publishers like Universal, Electronic Arts, Microsoft, Activision, Infogrames, THQ, Vivendi, Sony, Sega or Nintendo. Australian developers have been 'discovered' by global publishers in recent years because of the powerful combination of fresh local creative talent. Australian developers have established a reputation for delivering high quality, highly playable games on budget and on time.

Within this context the AIE is positioned as a private, not-for-profit Registered Training Organisation playing a unique part in the burgeoning computer games and graphics industries in Australia, as both a skills provider and a driver of industry growth

Founded in 1998 AIE is both a founding member and driving strength behind two central forces in the Australian Games Industry; the Australian Game Developer's Conference (AGDC) and the Game Developers Association of Australia (GDAA).

AIE identified a need for the AGDC within the Australian market, founded, established and developed the conference, now recognised internationally as the games event in the region. The AGDC provides an invaluable forum of both information and opportunities on many levels, for people within or interested in the games industry worldwide.

Through the GDAA, AIE maintains close links with leading Australian games companies. This unique industry position allows AIE to quality assure products and services through regular industry forums including monthly Games Developers Association Meetings, regular visits to AIE by industry management figures and industry trainers and the GDAA advisory board. It also assists in anticipating new demand and trends.
For example, AIE recently completed the first full study of production and games companies in Australia which looked at future software and employment trends. This survey informed future training needs and, for the first time, provided a clear gender breakdown of the workforce within the Games industry.

Nearly 400 students have been trained at the AIE to date and the numbers continue to grow. The rate of graduate employment has been consistently high and over the years AIE students

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have been employed by many Australian and overseas games companies and production houses like Brilliant Digital Entertainment, Ratbag, Digital Alchemy, Animal Logic, Sony, Micro Forte, Irrational, Infogrames, Taurus, Tantalus, Disney and so on. AIE graduates are also employed in many other related graphics and interactive fields including multimedia, film and advertising, web design, bio-technology, real estate modelling, e-commerce and on-line training.

AIE current enrolments stand at 200 full time students with around eighty students involved in part time pathways courses through schools or as part of equity group participation.

As part of its mission to grow industry within the country AIE has introduced a number of additional initiatives, including the establishment an incubator scheme. Selected graduating students can be chosen to participate in small business development projects. AIE supports businesses in their initial development through material, financial and mentoring assistance and offers them premises in Canberra Technology Park, a site set up by AIE for this purpose.
Recently AIE has been a catalyst for the establishment of a local Digital Industries Network and has also gained local Government Funding to purchase commercial licenses and establish a render farm to assist industry and start –up activity.

AIE has worked closely with Canberra Institute of Technology and Games partner Micro Forte` Games to develop and refine an internationally recognised training model which works most effectively for all stakeholders.

The following two tables summarise respective roles and benefits.

Talent identification.	Entry level training	Transition to employment	Industry development
Supporting Yr 11 and 12 accredited studies in media specialisations	Accredited courses including • Cert IV, • Diplomas, • Advanced Diplomas • Degrees • Grad Certs • Grad Dips.	Establish an incubator program Promotion of student profiles	Sponsoring & mentoring start up subcontractors Sponsorship of local digital industry association Management of industry development grants
Short courses in specific skills. Open days		Short courses in specific skills.	Project sourcing Skills brokerage Manage the industry conference and academic summit R&D providers Industry developers and suppliers network

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Activities	Technology benefit Assists the development of CIT's status as an advanced Technology Institute.	benefit Development of new local talent enables the growth of core business.
Specialised training in digital media including: • 3D Graphics- High End and Real time • Game Design and Development • Visual FX • Software Development • AI, Interfaces and 3D environments • Digital special effects • Programming • Sound & audio • Scripting and Concept Art • Project management • Production • E-commerce	Enables new fields of study to be developed in parallel, serviced by the resources of the academy	Expansion into new fields with the availability of more highly skilled workforce
Expansion of alternate funding sources to provide growth independent of CIT's profile constraints. Includes: • Industry support • Scholarship sponsoring • Commercial projects • Sponsored R&D • Technology donations.	Rapid launch into highly credible adv. tech area with growth untied to CIT profile constraints. Associated links to industry suppliers	• R&D growth
Subcontract delivery of CIT accredited modules and courses in creative digital media disciplines Recognition of the graduates capabilities.	Supports new profile opportunities • Sponsored student places • Graduate placement • Incubator • Skills centre	Increases the available talent pool • R&D support • Development of a pool of subcontractors or employees.

A National Skills Council

Australia is still in a position to share in a significant portion of the rapidly expanding world digital economy. An important component of success will lie in our ability to create highly skilled people through education and training which matches and anticipates required skill sets within the Games and interactive industries.
This challenge will best be met by a national and innovative approach to training that recognises the limitations of traditional models in such a new market.

The last two years have seen a huge increase in the number of training institutions offering courses with the words ' electronic games ' in their titles. This reflects the increasing awareness of the size and rapid growth of the industry and a rise in demand from students, but does not necessarily encompass any real knowledge of the skills or entry level training required by industry.

In this as in other new media areas, students, careers counsellors, teachers and parents are often not sufficiently informed to make appropriate study decisions and waiting for this part of the market to 'catch up' may well be futile given the rapid and frequent developments inherent in the interactive technology area

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Feedback from our industry partners, industry associations, schools and students with experience of Games courses all indicates that many Australian vocational and higher education institutions are not providing students with the skills and experience most highly valued by the Games industry. Many graduates are, therefore, being poorly prepared for employment through inadequate length of training, inappropriate curricula and lack of expertise in course delivery. Many courses, for example, pay little heed to the generic skills of communication, teamwork and time management consistently identified as important by developers and do nor expose students to the realities of game development processes and cycles.

This training lack is in a context where, under pressure from overseas publishers, development companies have rapidly 'raised the bar' for entry level employment and where the range of skills involved in games production is constantly evolving and growing.

A National Skills Council, funded through ANTA and consisting of industry leaders and key representatives from higher and vocational education could achieve as a first priority a national accreditation system which identified essential elements of training/education for Games, Animation, FX and Film industries.

But such a council would to be much more than a curriculum advisory body, In an industry that is so new, that changes so quickly, that requires such a range of skill sets and that is led by production based problem solving and R and D, it is vital that industry is integrated with training design and delivery. Accreditation processes would therefore need to require evidence of such a link and thus facilitate integrative involvement between training and reputable industry participants.

As noted, the Games industry worldwide continues to develop and grow at a rapid pace. Developments in areas such as artificial intelligence, wireless technology, graphics capability and multiplayer on-line systems need to be reflected in education and training. Specialist sub-sets of skills are also required by industries that cater to the Games and Film industries. Current accreditation models are, unfortunately, not responsive enough to cater for frequent changes to, and almost immediate evolution of, new curricula required to meet industry needs in these areas. This is true of both Vocational and Higher education processes and leaves a large training gap. National Leadership is required here to provide educators and trainers with a framework to quickly endorse and quality assure new training to meet increasingly diverse needs. Further, a Skills Council should establish best practice and innovation registers to assist in the rapid development of cutting edge training.

National accreditation through a Skills Council is necessary to:
- Meet the needs of local companies and provide an assured pool of talent
- Provide a flexible framework to allow curricula to ' keep up ' with development
- Assist in attracting projects and publishers to Australia
- Create a model to promote relevant R and D activity and establish work related outcomes through the vocational and higher education system
- Provide a basis for public funding for those entities that can demonstrate close involvement with industry appropriate industry partners
- Identify and promote transferrable skills within New Media areas.
- Inform market decision making about courses.

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Cross Sector Training

New and emerging creative industries require innovative ways to create a diverse but essential skills base that underpin growth in film, animation, special effects and electronic games industries. Neither conventional skills training as typically found in VET nor highly abstracted learning as typical in Higher Education models are entirely suitable for achieving the skill sets and other attributes required of workers in these industries.

Cross-sectoral partnerships involve more than qualification recognition between Secondary Schooling, VET & HE providers. They refer to supporting each sector with the specific skills and knowledge uniquely available in each. Ideally VET and HE provide access to industry intelligence and industry relevant qualifications for Secondary Schools. Collaborative arrangements can also make resources and expertise available to secondary students. In return, Secondary Schools provide a talent identification program and possible talent that has already commenced relevant skills development. The relative strengths of VET and HE can provide complementary benefits in sharing resources and expertise. Appropriate collaboration can provide integrative involvement in designing and delivering alternate qualifications pathways.

The imminent introduction of an associate degree likely as a higher education award within the Australian Qualifications Framework will cause concern for VET providers. The accreditation of these Higher Education courses for delivery by VET providers is likely to be managed on an individual state and territory basis. If under the current provisions, the accreditation will only be valid in the state or territory of the accrediting authority. Extension into other states and territories will require reaccreditation by that state or territory accreditation agency.

For instance where a higher education course, say at associate degree level might be accredited by the ACT Accreditation Agency for delivery in CIT, that same course would not be available for delivery in another state until the course was reaccredited by their accreditation authority.

Universities on the other hand are relatively unconstrained in their ability to deliver their self-accredited Higher Education courses and awards across geographic boundaries.

For VET providers the required concurrent accreditation or reaccreditation associated with delivering higher education programs interstate, creates unnecessary duplication of effort, delays in training response and needless additional costs associated with lengthy consultation process, travel and extra fees. This consequently reduces the flexibility and responsiveness of VET in meeting particular training needs of geographically distributed businesses that film, animation, special effects and electronic games industries are typical of.

The extension of the existing mutual recognition by States and Territories of each other's accredited VET programs to include accredited Higher Education programs delivered by VET RTO's, may provide one answer to this problem."

To maximise skill development National Skills Council should accredit courses at a national level and sponsor pathways that provide the best of vocational and higher education contexturised to the Games and other new media industies

Incubator Models

As with many other areas, pathways into the electronic game industries are often blocked by industry need for ' experience ' as opposed to' training. It is essential to incorporate work

experience or mentored training, in conjunction with industry, in effective education models. Traditional short term work experience sessions are, however, not usually viable in a Games development environment because of security and IP issues and because of the high level of skill development required of the participant.

Incubator models can be innovative best practice models in teaching/learning and directly support States and Territories regional business development priorities providing support for industry start up enterprises in these creative industries. They are vital in generating not only start up opportunities but also the experience of production realities highly prized by Games companies. They are a good example of the sort of situational learning that should characterise effective learning for Games and related companies.

AIE has recently introduced a refinement to its own incubator model that places six students with a Games partner in an internship, work based assessment and training situation. The Games partner offers scholarships to the students to cover course fees and expenses and supplies 'mentors' for each of the students while the training organisation coordinates learning and assessment through the experience. This is one example of a model that might be used more widely to help create and sustain a reliable skills base on which industry can confidently build.

An important role of a National Skills Council could be to coordinate and lead a national incubator scheme funded by a **national innovation fund.** Best practice can be encouraged in devising integrative learning models that include authentic and realistic simulated projects that draw on directly on practitioners knowledge to assist learners contexturise their learning experiences, These programs would typically demonstrate the ability to devise structured learning experiences that also accredit work experiences, devise opportunistic collaborations with industry practitioners, provide opportunities to undertake commercial projects, and ensure integrative involvement in course delivery. These learning experiences would integrate technical skills development with key employability capabilities.

Conclusion

The effective development of a sustainable highly skilled work force for the Electronic Games industry is a major challenge for Australia. A national approach to training and education is essential if Australia is to fulfil its current potential as a significant player on the world scene.

A representative National Skills Council funded through and responsible to ANTA would be an effective strategy to unify and inform the vital training and education sector.

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1 July, 2003

Supporting Letter.

The Academy of Interactive Entertainment supports in full the information and recommendations contained in the submission by the Games Developers Association of Australia to the Inquiry into future Opportunities for Australia's film, animation, special effects and electronic games industries.

Sincerely,

Ian Gibson

[Head of School. AIE]