

Australian Network for Art and Technology

www.anat.org.au

 Telephone +61 8 8231 9037 Fax +61 8 8211 7323
 anat@anat.org.au

 PO Box 8029, Station Arcade, SA 5000, Australia
 EAF Building, Lion Arts Centre,
 North Terrace, Adelaide, South Australia

ANAT NEWS

The new century is shaping up to be as busy as ever at ANAT. With the Telstra Adelaide Festival 2000 now upon us, ANAT have been working with the Festival and in particular with Teri Hoskin of the Electronic Writing Research Ensemble, towards the realisation of **Verve: The Other Writing**. In February ANAT also provided support to Time's Up and radio q u a l i a on the development of **Closing The Loop 2000**, a series of workshops and presentations in the lead up to their involvement with the Biomachines project for the Adelaide Festival.

The last few months have seen some staff changes in the ANAT office in Adelaide. **Charity Bramwell** began work in the (very part time) position of Information Officer in early December. In January **Amber Carvan** commenced work in the position of Manager, a position **Anne Robertson** filled most admirably during much of last year. We wish Anne all the very best for her future endeavours! In January, after two and a half years doing an extraordinary job in developing the technical side of ANAT's work, **Martin Thompson** resigned from the position of Web and Technical Officer. In March, **Michael Shanahan**, who has previously worked with the Media Resource Centre, the Investigator Science and Technology Centre, Ngapartji and most recently Megafun will be taking up this position, also part time. We wish Martin every success in his new pursuits and welcome Amber and Michael to ANAT!

This coming year ANAT will continue to focus on further developing networks in Asia through our **A Digital Region?** thematic, and are now in the process of setting up projects and residencies in this geographic region. The first of these projects is being undertaken in collaboration with Asialink and is a residency which will take place at Chulalongkorn University in Bangkok, Thailand. **Chris Caines** has been selected by ANAT and Asialink for this residency.

A core focus for the **Alchemy International Masterclass** to be held in Brisbane in May and June will be on issues facing artists working in the Asia region, and will explore what forms of collaboration and exchange might be set up for artists and organisations between and within our region. We are also continuing our prioritisation of the region in the NOTICES section of the newsletter, although with the next newsletter we hope to incorporate this information in with our general listings, much as we now have with science listings following on from our prioritisation of that area of our work during 1998.

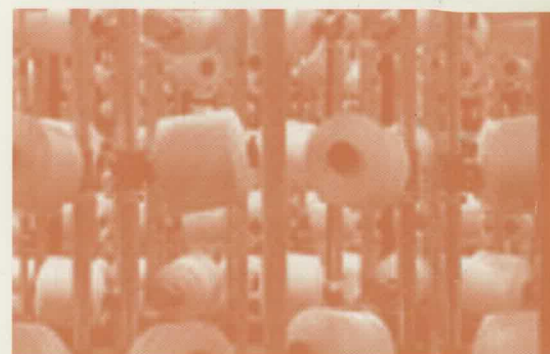
During 2000 we will also be developing a focus on exploring links and connections between art, science and theology. **Samara Mitchell** has been undertaking research in this area and will be developing a focus group to further explore these concepts. ANAT members interested in providing input into this area of our program development should contact the ANAT offices.

Amanda McDonald Crowley
 ANAT Director

2000 Project Updates

VERVE: The Other Writing

Verve: The Other Writing takes place at the Telstra Adelaide Festival 2000 between 3-26 March. The project presents an exploration of some of the other forms of inscription that constitute language. Verve will exhibit and stage works that consider the effect that technology has had on the way we read, write and generate language. Verve serves as both a celebration and an opportunity to brush against the text, to consider relationships between elements in a multitude of ways.



"Red Dice" by Bill Seaman, on display at CACSA as part of the Telstra Adelaide Festival 2000 Visual Arts program. Image courtesy of Bill Seaman.

Exploring the intersection of writing with the visual arts, music, performance and contemporary digital practices, the project includes performances, exhibitions, lectures and workshops by more than 29 local and international artists, thinkers, writers and musicians.

Verve: the Other Writing is being held in six venues, with the Contemporary Art Centre of South Australia (CACSA) and verve writing (online) acting as hubs for the program.

The online component of the project <<http://vervewriting.org/>> acts as a guide and extension of the physical spaces for Verve. Apart from extensive information and resources relating to the project, the audience can join the listserv forum, browse the web sites featured there, and be involved in generating new works.

Based on the popular Noon Quilt at trAce Online Writing Community, the Electronic Writing Research Ensemble's contribution to Verve, 'pricklings', provides an opportunity to write up to 100 words about anything relating to notions of 'other writing'. 'pricklings' makes up a pattern or a design based on a number of variables, time of submission and the number of words.

Verve events at **The Contemporary Art Centre of South Australia** provide opportunities to peruse the exhibition of artists' books from the Experimental Art Foundation Collection, to sit back and watch a video from a selection by local and international artists and musicians, to read photocopies of FLUXUS magazines, or check out the verve writing online offerings. The room, designed by a collaboration between installation artists Dylan Everett and Peter Harding, features salt sculpture, theatrical lighting effects and comfortable furniture.

Guests at CACSA for the workshop/performance aspect of the project include: Michael O'Donoghue on the translation of hieroglyphics; Junko Banks who will lead a workshop on Japanese calligraphy; Linda Carroli, Sue Thomas and Terri-ann White who will host a forum on internet writing practices; performance artist Susie Fraser, and installation artist/writer Mark Stephens read selections of their work, while UK multimedia performance artist Kevin Henderson, guest of the Experimental Art Foundation for the Festival will speak on the use of artist books as a medium in his practice. Austrian artists Tina Auer and Wiltrud Hackl will present their video collaboration 'drive -in- progress, Austria-Australia'.

The series closes with Libby O'Donovan performing a structured jazz improvisation with Belinda Gelhart (violin), Shereen Khemlani (bass) and Jo Kerlogue (visual artist).

The Verve event at **Ngapartji Multimedia Centre** on March 9 hosted the final day of Artists Week.

The event presented an array of elements that constitute writing and reading in a time increasingly mediated by digital technologies and environments.

People and events at the Verve/Ngapartji event included Gregory Ulmer (USA) and Linda Marie Walker who presented Cyberpidgin, a conversation via cu-see-me.

Victoria Lynn, curator at the Art Gallery of New South Wales introduced Bill Seaman who spoke about his work as a multimedia artist, writer and theorist. Sue Thomas, Director of the internationally acclaimed TrAce Online Writing Community (UK) and MOO aficionado presented her thoughts on Living Online.

Adele Hann, Event Coordinator for the Media Resource Centre spoke about the history of avant garde film making practices and Jyanni Steffensen presented an analysis of Rosalind Brodsky - a creation of Australian/UK based digital artist Suzanne Treister. The day closed with a performance by Kenny's Window, a local contemporary classical three piece ensemble. Jason Sweeney of <pbx> MC'd the event which was streamed local and live during session breaks.

In addition to the online, CACSA and Ngapartji events, Verve is also taking place at the **Performing Arts Technology Unit** of Adelaide University (where world renowned classical and experimental musician Stephen Whittington will perform with piano, text, ladders, video and 16mm film), at **Artlab Australia** (where a series of lectures and host tours will take place regarding the importance of conservation in the formation of cultural identities) and at **Worldsend** for an exhibition of selections from 'Batman, Legends of the Dark Knight' by South Australian based artists Glen Lumsden and David de Vries.

Visit Verve online at <<http://vervewriting.org/>> for a full program of events.

Verve: The Other Writing is commissioned by the Telstra Adelaide Festival in collaboration with ANAT, CACSA (the Contemporary Art Centre of South Australia), and the Electronic Writing Research Ensemble and is supported by Ngapartji Multimedia Centre, Artlab Australia, and the Australia Council.

International Masterclass for New Media Artists and Curators

For the first time, in 2000 ANAT's renowned National Summer School program will be replaced with a Masterclass and has been extended to incorporate elements of the Curators school and the Indigenous artists school initiated in 1999, and has been opened up to international participation. In association with the new **Brisbane Powerhouse Centre for the Live Arts**, ANAT's International Masterclass for New Media Art Curation and Theory will take place for six weeks from 1 May to 9 June 2000.

As with previous ANAT National Schools, workshops will be conducted by artists and cultural workers for the duration of the project and between and during the workshops the participants will be provided with 24 hour access to a lab, exhibition/ installation/performance space and workrooms within the context of a critical production site.

It is envisaged that at any given time there will be two workshop leaders and up to 20 participating artists and arts workers. The makeup and composition of this will change as it is not anticipated that it will be the same group of tutors or participants for the entire duration of the school.

Applications for this project closed on 18 February, and we are currently in the process of selecting candidates. A number of notable national and international participants as well as tutors will be attending the school. International tutors will also be travelling to other parts of Australia as part of the project. Tutors include:

- **Alexei Shulgin**, net artist, performer and curator, from Moscow
- **Nina Czegledy**, an independent media artist, curator and writer, Nina divides her time between Canada and Europe
- **Mongrel**, a mixed bunch of people and machines working to celebrate the methods of an 'ignorant' and 'filthy' London street culture. Mongrel make socially engaged cultural product employing any and all technological advantage that they can lay their hands on.

Whilst Mongrel rarely operate as a core group, core members who will be participating in the masterclass are: Matsuko Yokokoji, Richard Pierre-Davis, Mervin Jarman and Harwood

- **Geert Lovink**, lecturer and activist who has participated in many conferences on independent media, the arts and new technologies internationally, and has presented at previous ANAT events, CODE RED and resistant media: NxT
- **John Tonkin**, animator, web artist who develops his own software in low level programming languages such as C++ and Java. Tonkin has taught at many of the previous ANAT National Summer Schools and is currently in receipt of a fellowship from the Australia Council's New Media Fund
- **Rea**, (Gamileroi/ Wailwan), an internationally recognised artist who specialises in developing digital media, and who also participated in the 1999 ANAT National Summer School in Science and Art
- **Tess de Quincy and Laura Jordan**, respectively performance artist and new media artist. Tess and Laura have collaborated on performance and research events including Triple Alice, an ongoing project over three years which seeks to provide a space for cross disciplinary research and development
- **Marko Peljan**, Ljubljana based performance and communication artist and writer, founder of the arts organisation Projekt Atol and Program Coordinator of Ljudmila (Ljubljana digital media lab). His most recent work Makrolab was part of Documenta X, and is currently installed at Rottsnest Island as part of the Art Gallery of Western Australia's Home project
- **Blast Theory**, a UK based performance group who produce highly interactive cross disciplinary works across a range of media.

To culturally contextualise the schools, satellite events will combine fora with open days at the school, giving the public and media an opportunity to view the work-in-progress produced by participants. The inclusion of curators as well as screen practitioners and artists in this process will ensure that various exhibition and presentation opportunities arise during the period of the project.

Additionally, we will expect that the connections and contacts developed during the Masterclass will ensure that exhibition, collaboration and presentation opportunities will also be realised after the event in the participants' countries of origin.

Throughout the Masterclass there will be a focus on skills development and skills sharing. As with previous projects of this nature ANAT have managed, in order to take into account the needs of participants, the program for the project will not be finalised until the participants have been identified. The framework for the school will also continually address issues of access to local and overseas works, theoretical issues in order to contextualise new media work, particularly within an international framework.

deep immersion: scientific serendipity

Tissue Culture and Art project

Oron Catts and Yonat Zurr, as part of the Perth Festival for the Arts, exhibited the results of an extended period of research and development of their Tissue Culture and Art project, in part supported by ANAT's **deep immersion: scientific serendipity** program.

In April 1999, they were invited to present the Tissue Culture and Art Project at the Media Lab, MIT, Boston, USA as part of The Media Laboratory Colloquium Series 1998-99. While in Boston they met Prof. Joseph Vacanti, who is a founder and the world leading figure in the field of tissue engineering. Prof. Vacanti has grown 22 different organs using this technology (his most (in)famous work was the mouse with the ear on its back). Prof. Vacanti also attended the presentation of their work. As a result he offered Oron and Yonat an opportunity to express their creativity in his laboratories. Oron and Yonat explain:

"We have no doubt that the opportunity to work and learn from Prof. Vacanti and his team is an opportunity that should not be missed. The technologies which are available to him are the most advanced in the world. He and his team are renowned for their innovative approach to the production of bio artificial organs.

"For us, artists who are practising hands on "Wet" biology as a generator of our artistic expression, a residency in Prof. Vacanti's Labs would place us in a position from which we can explore and research the cutting edge of tissue engineering. We will gain a unique knowledge pool, and improve our skills in the design and construction of three dimensional scaffold for tissue growth, as well as tissue culture and biomedical imaging techniques.

"The exposure to the new possibilities that these technologies present to us, will extensively develop and evolve our own artwork, our understanding and perceptions of its future effects.



From "Personal Eugenics" by John Tonkin, currently on display at Art Space. Image courtesy of John Tonkin.

"We also see a possibility of cooperating with some other bodies and/or institutes in Boston that will enable us to further develop our skills and the scope of the project. In the Media Lab, for example, we already formed some initial connections with Dr. Scott Manalis head of Nanoscale Sensing <<http://www.media.mit.edu/Projects/manalis.html>>.

"We would like to be able to design, construct, monitor and interface with objects, which contain living tissue (Semi living objects), and to be able to sustain them alive outside the lab."

Scismic Project

The Scismic Project is also supported by ANAT as part of **deep immersion: scientific serendipity**. The latest news on this project is that David Rogers has further developed his earthquake generator project, and has now rebuilt the 'shaker-table'. David recently gave a presentation about the project at Metro Screen's sound in multimedia forum.

Whilst the initial stage of this project was primarily concerned with engineering problems of getting the table operational, the potential for David to engage more directly with seismologists to interpret data is very exciting. An interesting adjunct in the development of the work has been the way that sound works with the installation and how one is affected by sound when in the proximity of the work.

ANAT will be further developing the central web site for the deep immersion: scientific serendipity program, and will be working with David to document the processes he has employed in building the earthquake generator.

Makrolab

Marko Peljan's Makrolab is currently installed on Rottnest Island off the coast of Fremantle, WA. Makrolab is one of the works in the Home project curated by the Art Gallery of Western Australia as part of the Perth Festival of the Arts.



Above: Marko Peljan at work on the Makrolab project, currently situated on Rottnest Island as part of the Perth Festival. Below: Francesca da Rimini at work in Makrolab. Images courtesy of Marko Peljan and Raigirl.

Access to the lab is only by bicycle or bus as there are no cars on the Island, and the lab itself is a closed research space. Artists in residence in the lab are, however, going online daily to engage with audiences. Slovenian artist Marko Peljan first came to Australia as part of ANAT's CODE RED project, undertaken in collaboration with The Performance Space and curated by Julianne Pierce. Marko will also be travelling to Brisbane after the Makrolab project is over, to participate in the Alchemy masterclass.

Marko has invited artists to submit proposals to be in residence for short terms during the project, which runs until the end of March. ANAT has been working with Marko to identify Australian artists to whom we can provide small amounts of support for travel and living expenses whilst in residence in the lab. Check ANAT NOTICES for further information. Francesca da Rimini, the first Australian artist to be in residence, has documented her experience at Makrolab on the web. You can find her Rottnest diary online at <www.thing.net/~dollyoko/POD/INDEX.HTML>

Closing the Loop/ Biomachines

In addition to the Verve project, ANAT has been busy providing support to a number of new media projects and events planned for the Telstra Adelaide Festival 2000. These have included the Closing the Loop 2000 project and Biomachines - a post-industrial carnival meltdown.

Closing The Loop was an international research and performance project examining how sound, technology and gameplay can conspire to promote collaboration and inventiveness across networks. The CTL2000 project is aimed at investigating the effectiveness of techniques for net based collaboration.

CTL2000 was divided into two distinct phases. The first phase (incorporating a Research Laboratory and a Social Laboratory) took place at two venues in South Australia earlier this year. At the Research Laboratory, a number of artists, pseudo scientists, technicians and geeks from around Australia, Austria, Germany, the Netherlands, and New Zealand gathered together to examine sound technologies and online networks with a view to collecting and compiling these experiences into a coherent form. The manifestations of this research were presented (live and online) at a Social Laboratory in Port Adelaide on 12 February.

Phase two, the culmination of these activities, takes place at the Biomachines Laboratory in Port Adelaide between 9 -12 March.

Biomachines, devised and curated by Julianne Pierce, David Cranswick and Tim Boykett, is an autonomous entertainment area, comprising robots, machines, fire and sound. Part factory, part performance space, part club - the event provides an interactive underworld of games, entertainment and sonic reverberations. Biomachines is presented by The Performance Space and the Casula Powerhouse Arts Centre as part of the Telstra Adelaide Festival 2000, and featured an impressive line up of Australian and international artistes, pseudo scientists and mechanic pranksters. These include John Kenny, Anne Sabiel and Shane Fahey, Theatre of Hell, Time's Up, Heliograph, Matt Heckett, Josephine Starrs, Leon Cmielewski, and Triclops International.

deep immersion: regional realities

As a continuation of the projects which we have been developing and supporting through deep immersion: creative collaborations, and deep immersion: scientific serendipity, ANAT has recently been exploring possibilities for collaboration and exchange between artists and organisations in the Asia region. Apart from providing some small amounts of curatorial support to the fantastic initiative of Multimedia Arts Asia Pacific (MAAP) in their development of the online collaborative project "/networks" ANAT has started to develop other forms of collaboration and exchange.

The first of these initiatives has been developed in collaboration with Asialink. This project is a residency which will take place at Chulalongkorn University in Bangkok, Thailand. Chris Caines is the artist who has been selected for this residency, which will take place in the latter part of 2000. We are now working with Chris on establishing networks and connections for him in Thailand which he can further develop whilst in residence at Chulalongkorn University. Chris works in online and disk based multimedia as well as video and sound. He has been exhibiting widely since the early nineties in national and international galleries including MoMA in New York, The Tate, UK and the State Galleries of NSW and QLD.

His work has been shown at Cannes, Berlin, London, Venice and Tokyo film festivals. While teaching in digital media and production at numerous tertiary institutions, he has pursued research into modes of nonlinear storytelling and fictionalised histories using dense collage techniques. During his residency at Chulalongkorn University he will be developing a new online work based loosely around elements of Thai history, weaving them into a piece using the structure of classical Thai textiles as the form of the narrative. Chris explains:

"Research activities to be undertaken during the residency with the Fine Arts Dept at Chulalongkorn University will concentrate on the development and production of a number of flash based database driven online narrative works. Central among these works is a piece that weaves elements of Thai and European history with a fictional secret history of computing to create a narrative environment that re-writes itself. Source elements will come from Sydney, Bangkok and Northeast Thailand. While in residence I will also assist/consult in Chulalongkorn with the development of their proposed MA academic program in electronic/digital arts."

This is an Asialink project in partnership with the Australian Network for Art and Technology, as part of ANAT's deep immersion: regional realities program and is supported by the Australian Embassy, Bangkok and the Australia Council.

Further projects in this program will be developed throughout 2000.

Thematic focus: art, science and theology

ANAT has always explored the interdisciplinary nature of art, science and technology within political, cultural and social frameworks. In the year 2000 ANAT's focus is experimentally theological - examining the crossroads of science, technology, ethics and religion within contemporary cultural practices and social structures. To quote Laura Stevens, (a student of theology who assisted in the initial conceptualisation of this research) "art technology and religion are the common factors shared by all cultures."

To generate ideas for future related projects in this direction, ANAT is inviting several key theorists, scientists, artists and representatives of diverse religious and spiritual communities, to participate in a focus meeting to be conducted across one weekend during this year.

Theology is a particularly human technology that has evolved in order to reconcile the biological drives of the brain with the sociological needs of the human mind, resulting in the experience of transcendence.

As Edward O. Wilson postulates in a chapter entitled Ethics and Religion (from *Consilience: the Unity of Knowledge*, 1998):

"The human mind evolved to believe in gods. It did not evolve to believe in biology. Acceptance of the supernatural conveyed a great advantage throughout prehistory, when the brain was evolving. Thus it is in sharp contrast to biology, which was developed as a product of the modern age and is not underwritten by genetic algorithms. The uncomfortable truth is that the two beliefs are not factually compatible. As a result, those who acquire hunger for both intellectual and religious truth will never acquire both in full measure. Meanwhile theology tries to resolve the dilemma by evolving science like toward abstraction."

The quest for abstraction and transcendence share a common goal - the unification of beliefs and empirical knowledge. The human desire for transcendence is an arguably hard-wired behaviour. This impeccable state of being, separate from the physical laws of the natural world, has been sought in the supernatural or the divine in vast majority across a great many cultural traditions.

Art, religion, science and technology are the progeny of our inquiry into supra-human or trans-human experiences. As societies have evolved, the mechanisms of religion and technology have become systems for the government of physical life, and less about transcendental spirituality.

In the twentieth century, the threads of transcendentalism have filtered through creative approaches to modern physics, mathematics, communication and bio-technology.

Genetic engineering, cloning, Artificial Intelligence research and the religious dreaming of cyberspace have snared the popular imagination and raised new ethical concerns about human evolution. The application of these technologies have started, however their contributions to human spirituality remain suspended between physical and virtual realities.

The discussions and ideas that emerge from this meeting will be facilitated and documented by Samara Mitchell, ANAT's Project Officer for the Art, Technology and Theology Focus Group Project.

The Triclops International Flying Platform - one of the features of "Biomachines" currently showing as part of the Telstra Adelaide Festival 2000. Image courtesy of Triclops International.



The role of the Project Officer at the focus meeting, is to record and report upon the discussions that take place. It is not the intention of ANAT to be prescriptive about the topics covered within this meeting, however some fundamental preliminary research has been conducted by Samara that touches on hybrid convergences of philosophy, religion, ethics, science and technology.

It is the attention of ANAT that the outcomes of the focus group will become a platform for further research and artistic practice in the combined areas of arts, technology and theology for the coming year. Suggestions regarding relevant contacts or topics to be covered within the focus meeting are most welcome. To register interest in participating in the Arts, Technology and Theology meeting, please contact Samara Mitchell at the ANAT office between 10am and 6pm on Tuesdays, or by emailing anat@anat.org.au

CONFERENCE AND WORKSHOP REPORTS

The inaugural Japanese MSP Summer School was held at the International Academy of Media Arts and Sciences (IAMAS) in Ogaki, Gifu Prefecture, Japan from 25 - 29 August 1999. This was a very technical School, based tightly around a certain software - MSP. With assistance from the ANAT Conference and Workshop Fund, Jeremy Yuille was able to attend the school. Following is an extract from his workshop report.

MSP SUMMER SCHOOL by Jeremy Yuille

MSP is a recent set of "extensions" to the software MAX, that allow artists to manipulate digital audio in real-time. MAX is a development/prototyping environment for controlling and generating multiple streams of media (MIDI, audio, QuickTime, Text, Voice synthesis etc). It allows artists to develop systems that use one or all of these media, they may also test these systems as they are being built, in real-time. MSP lets artists get their hands on the raw data that is digital audio, and in this respect it allows new and interesting forms of expression and control over said data.



Jeremy Yuille out to dinner with fellow participants at the MSP Summer School in Japan. Image courtesy of Jeremy Yuille.

I really began to understand the collaborative and educational possibilities of MAX MSP during this workshop. I gained a good understanding of complex musical concepts and started to imagine what it might be like if more schools used these kind of tools. Details of some of the individual sessions are below.

Instrument building and organising complexity

This session, run by Les Stuck, covered two very closely related subjects. Those who have used MAX or MSP (or tried to draw the process of making digital music) might be familiar with the duality of sound production and performance. The discrete (as opposed to continuous) nature of digital systems makes it very complex to build something that will have the scope and playability of a 'traditional' instrument. MAX/MSP has its own ways of dealing with data - and some of them require a major paradigm shift to understand. I found it very useful to have someone "show" us how to do it - thus avoiding the painful process of trying to work it out on your own.

Looping live audio and filtering: theory and practice

This session, run by David Zicarelli covered some basic and not so basic aspects of looping audio, cut-up and random listening spaces. David Zicarelli's sessions were particularly enjoyable because it's always interesting to see how the person who developed the software uses it. From the way he subjects the strangely silent audience to a circa 1977 TV jingle CD to his 'Cut-Up-A-Tron' patch (and seeing he's from the Bay Area) I bet he's a closet Negativland fan. I am beginning to get a bit worried that the classroom is so quiet. oh.. and David Z says that MAX/MSP will be released on the Wintel platform by early 2000. (Unfortunately, judging the current state of the Opcode (who make MAX) / Gibson suits and counter suits - I wouldn't hold my breath)

On Incomplete Compositions

This session, again run by David Zicarelli looked at some possible uses of MAX/MSP, outside of the instrument building paradigm. Ideas like adding a MSP patch to a finished audio cd so that the cd can be 'played' by the listener.

Japanese Music and Culture

This session, run by Psychedelic Bunpou, prompted an interesting discussion: challenging the class to take their music and performances outside of the academic/art arena and to venture into more 'chaotic' (less traditional) surroundings.

This was particularly interesting as the academic members of the class all "strongly" argued "what if the software falls into unskilled hands?" and the others argued "what if it doesn't?"

It was during this workshop that the nature of 'control' arose. MAX is an environment that is so vast, it creates an option anxiety vortex quite easily. People tend to respond in a number of ways.. one (seemingly the most popular) is to move in the direction of more control - and with heavy prescription I find that works created (on the whole) tend to be more static, less surprising. The opposite tactic is to extend the chaotic 'mess' as far as is possible (processors usually give out before brains) - creating works which have enormous scope but sometimes little structure. I think the real strength of MAX / MSP is that it can accommodate both these extremes (and more).

All in all, a great week of workshops and meeting people who use the same software in a myriad of ways.

Following a recent study tour of major electronic arts facilities in Europe, Keith Armstrong had become particularly interested in the work undertaken by the V2 Centre for Unstable Media in Rotterdam. With assistance from ANAT's Conference and Workshop Fund, Keith was able to return to Rotterdam to attend Exploding Cinema - the main fringe event of the Rotterdam International Film Festival. Following is an extract from Keith's conference report, a personal insight into the highlights of Exploding Cinema.

EXPLODING CINEMA by Keith Armstrong

Exploding Cinema comprised a conference and program of screen based events, installations, performances and films, designed to look at how the Japanese have actively cross fertilised the arts of cinema, animation, film, Internet, design, the fine arts and games. The Conference was held between January 29 and February 6, 2000.

Interactive Video Installation by V2

V2 are currently developing of very sophisticated JAVA/ Linux based software system called the "Epic Generator", that allows activity within a physical space to influence the subsequent presentation of multiple channel digital video, audio and 3D graphics. This is a very advanced version of a Director based control system we have been developing in Brisbane, used recently in the 1999 installation "transit_lounge".

V2's system was debuted at the "Japan.Tech.Pop" event, an expose of the best of contemporary Japanese installation, video game, film, Manga and music, that took over the duration of the film festival in the Corso cinema in Rotterdam. V2's software was employed in a piece called "Re-sampling Tokyo" by Dutch artist Geert Mul. In this particular configuration up to four people could directly influence the pace, form and content of four video and audio streams by their movements within the space.

Resampling Tokyo replayed complex sampled images that presented Geert's meditations on Japanese life. These ranged from images of collaged neon cityscapes, vivacious nightlife and the collective spaces of work to the closely packed, intimate spaces of Tokyo home-life.

Geert used the flow of audience through the foyer of the busy exhibition as his stimuli for the presentation, avoiding the "dance party installation" format of interactive work where people make bodily contortions to stimulate the triggering of events. Hence this work responded to the collective dynamic ambience of the space rather than particularity of individualistic performance.

I was also able to have a satisfying individual engagement with the work as a "performator", when crowd numbers moving through the piece were low.

Japan.Tech.Pop Seminar

Held in one of the capacious Pathe cinemas on the steel-paved Schwouberg Platz, this seminar was headlined by Henry Jenkins, Professor of Comparative Media Studies from MIT. Sato Dai and Masuyana Hiroshi made shorter presentations, two Tokyo game artists who had instigated the fascinating "Tokyo Techno Tourism" sector of the *Japan.Tech.Pop* exhibition. (See later).

Jenkin's talk pointed to the crossovers and dissolutions of once more "easily" defined cultural categories. Interestingly after Jenkins had discussed Japanese culture's massive influence on contemporary culture, Sato Dai remarked that he didn't believe Japanese people realised how influential they really were at this stage, particularly in the European market.

V2 Public Briefing

Presented at V2's warehouse space in central Rotterdam, this was a chance to hear ideas from some media commentators on notational methods for designing interactive structures in installation, screen based and sound works.

It was also our first chance to sample Calin Dan's highly ambitious installation "Doomsday Now", a complex CG space of war and conflict navigated by dual exercise machines that made every decision both one of intellect and physical stamina.

The first speaker was **David Blair** of "Waxweb" fame. For anyone who has missed it *Waxweb* is an interactive cinema work with a potential 40 hours of DV footage. David described the internal logic of Wax and his later interactive cinematic works. He talked about what he termed "unified non entities in composition and presentation" and chronicled a long practice based on what he called the possibility of "emergence" in a work. He explained how his "association based story machines" allowed audiences to find their own narrative within the particularities of his own backstory.

Martin Bechammer, a Dutch game designer, gave us a comprehensive history of computer game development since the days of Space Invaders and Asteroids, although unfortunately, he ran out of time.

For me, the highlight of the session was Berlin-based, US sound and visual artist **Ron Kuivila**. His lucid, intelligent and deeply considered talk offered some real insights into the development of new forms of interactive and emergent artworks. By drawing parallels with the open source community of programmers who work collectively on improvements to their "symphony" (ie. the *Ars Electronica* prize winner Linux OS), he asked us to think towards how we might provide the ingredients for an artwork whilst not necessarily prompting the recipe. In other words how might we be able to create the spaces within which someone else can then meaningfully act?

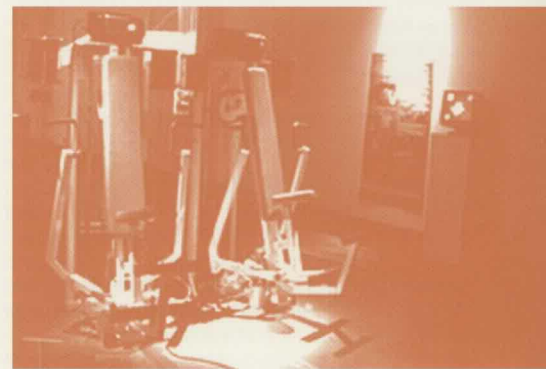
One illustration of his thoughts in the sound domain involved crumpling a piece of paper around a microphone, and hence generating an instant soundscape.

This attitude to production of work that develops a context for action rather than a specific outcome is very congruent with my own work. I suggested to Ron that works of this genre are arguably easier to construct in the sound domain given the current limitations of scripted digital vision.

This led to a lively after show talk that I hope to continue in more formal interview form in the near future.

The Tech.Pop.Lounge

In this session (another highlight) – a 50's red velvet clad cinema turned into a mix between a Japanese restaurant, an arcade and a cosy Tokyo flat full of gaming gear. Citing the convergence between game, art and design as complete, and therefore a non issue for Tokyo's heavily mediated younger generation, this show gave everyone the chance to experience Japanese innovation, with a particular focus on the non-violent and the quirky.



Calin Dan's installation of two fitness machines connected to a media system, exhibited as part of the V2 Public Briefing at Exploding Cinema. Image courtesy of Alex Adriassens.

Audience hits of the show were probably Konami Corporation's "Dancing Stage" and "Guitar Freaks". Based on similar principles to Bustagroove and the other gamut of hand eye co-ordination games on show our task was to dance on a stage of floor sensors or "play" a four-button guitar in time with screen animations, whilst working in harmony with a partner. These were definitely the most social two games on display, and many conversations were struck up during the experience. Apart from the latest dance/exploration/mystery games from *Dreamcast*, and the curious Japanese cooking and commuter train driving games from *Sega* (replete with Japanese instructions I sadly couldn't read) there were also whimsical and refined works such as:

Postpets: a Tamagotchi style email accepting and writing, in-computer pet that won its creator Hachiya Kazuhiko the 98 Prix Ars Electronica.

Kage Kage (shadow shadow): Motoshi Chikamori and Kyoko Kunoh's work where touching sharp cones mounted on a white round, vertical screen caused "shadow play" images and sounds to be emitted from the bases of the cones. It was suggested that the work indicated "the impossibility of objectivisable reality".

Urban Feedback – Giles Rolleston and Sophie Greenfield's CDROM that aims to recreate the fragmented urban experience of Tokyo in a complex interactive graphical and visual format.

Monkey Island – Gento Matsumoto's delightful romping of Saru the monkey around a range of magic islands which along the way allows the playing of some 20 puzzle-based games. For me *Monkey Island's* appeal lay in its non-teleological, win/lose free intent.

Renowned Tokyo digital media shop/gallery **Digitalogue** were on hand in the foyer with their "Floppy Market" selling some of these titles we had experienced and much more.

In other works simple eight frame animations were composed on units reminiscent of early pub Space Invaders and Galaxians table-top machines, Elsewhere Digital Origami was made possible and black video blobs deformed themselves curiously upon touch.

This was all washed down with constant Anime showings, Manga installations, a Sushi bar and nightly performances by DJs. All in all a very well attended/lived in show that was thoroughly worth the journey alone.

Cinema Without Walls

Elsewhere in Rotterdam other events were in progress – including the "No Cherry Blossoms - Visions of Japan" film series, which were subtitled in Dutch! At the Museum Boymans van Beuningen there were a number of more traditional video installation works as part of the "Cinema Without Walls" component. Amongst works by Ellen Cantor (Be my Baby), Fiona Tan (Smoke Screen & Cradle), Tacita Dean (Bubble House) and Sharon Lockhart (Teatro Amazonas), the work that really caught my time was Shirin Neshat's "Rapture".

This work has toured Europe recently and presents two large, facing black and white video projections that use a hundred Islamic men and women to explore the relationship of "sex with spirituality and philosophy within Islamic tradition". Acting as a thoughtful examination of a complex and potent field this was a temporarily cerebral antidote to the frenetic art back at the *Japan.Tech.Pop Lounge*.

This event was an invaluable opportunity to listen and debate with potent speakers, view some cutting edge and highly contemporary work and also to network with my peers.

CRITICAL WRITING

Continuing ANAT's thematic focus entitled A DIGITAL REGION? the critical writing section of the newsletter looks at issues relevant to art, technology and science in the Asia and Pacific regions. In this edition, Frederick Noronha evaluates the outcomes of COMMSPIRE 2000 - a conference on Affordable Telecom and IT Solutions for developing Countries, which was held in Chennai, India between 28 February and 2 March, 2000. This article originally appeared on Nettime <www.mediafilter.org/nettime>.

Ideas Aplenty on How Software Can Help the Millions by Frederick Noronha

CHENNAI (South India): Ramesh is a daredevil rickshaw in this bustling South Indian city, but the computer boom that India is going ga-ga about means nothing to him. Bangalore may well be India's Silicon Valley, yet booming software stocks and the millionaires that it has created leave dwellers in slushy city slums cold.

Taking this worrying trend into account, researchers from across India and elsewhere are trying to change the situation and "touch the lives of millions", by making crucial telecom and Internet technologies affordable to larger numbers in the developing world.

"Otherwise, we will end up having just 2-3% of our people with access to these technologies," warns Prof Ashok Jhunjhunwala of the Indian Institute of Technology (Madras), which has just hosted a global meet on providing affordable telecom and IT solutions for developing countries.

Access to telecom networks and the Internet is fast becoming a major factor determining the competitiveness of an individual, group or society, researchers point out. To translate this into something meaningful in the common man's life, technologists and academics have brought in amazing stories of how modern technologies can, and are, changing lives.

Called Commsphere 2000, this meet brought in reports of how Delhi slum-children were acquiring basic computing skills without any instructions or knowing any English; and how remote villages in Bangladesh are to get phone links without even being connected by copper wire.

Engineers in Chennai's IIT have designed phone networks that slash the costs of installing phones to less than half of the US\$1000 (one thousand US dollars) in infrastructure it normally costs, by resorting to 'wireless in local loop' (WILL) technologies.

A South Asian initiative, run by volunteers from India and Bangladesh, is called bytesforall.org and looks at experiments being conducted across SAARC to making computing and the Internet "relevant to the needs of the millions".

"It is now possible to give 4.5 billion people the ability to leapfrog onto the Web, wherever there is electricity supply, even without a traditional phone line connection and without a personal computer," says University of Bradford media communications doctoral candidate Peter D.O'Neill.

His proposal is to deliver multimedia services via powerline communications (powercoms) along the electricity line to the "most humble dwelling", even if it has a just a single light bulb dangling from the ceiling. Authorities in Bangladesh are toying with similar plans.

"There is a case for seriously examining this technology for local loop applications in countries like India, where over 70% of households have power line connections already. Even a fraction of this conductor-capacity made useable for additional communication purposes would (make a huge difference)," agreed electronics professors C.N.Krishnan and P.V.Ramakrishna of the Anna University's MIT in Chennai.

From Hyderabad, the Indian Institute of Information Technology (IIIT) stresses the "absolutely basic" need for computing to be done in Indian language scripts.

"Alpha-versions of machine-translation from one Indian language to another already exists in five Indian-language pairs," reported Vineet Chaitanya and Rajeev Sangal of the IIIT-Hyderabad's Language Technology Research Centre.

Work is going on in Hyderabad on a large-scale system and, if successful, will allow e-texts including web-pages to be accessed by Hindi readers on demand.

New Delhi-based Shyam Telecom Limited is using IIT-Madras technology for corDECT (rpt corDECT) phones — that connect telephones to the exchange wireless, thus reducing costs — and which have found export markets in rural Madagascar, remote Fiji, hilly Yemen and suburban Kenya. Encouraging results are already being reported.

Such technology is also being deployed in Bhopal and New Delhi. corDECT was developed by IIT-Madras, M/s Midas Technologies and got support from even the Analogue Devices of the US.

Engineers from the IIT-Bombay are meanwhile planning a communication system for health care needs which "will be very relevant to India".

Bangalore-based Indian Institute of Science (IISc) Professor Kumar N Sivaraman has, on the other hand, developed, an Instruction-On-Demand (IOD) software tool, which simulates on a user's PC screen a typical seminar environment where a speaker lectures using overhead transparencies to students across distant, remote locations.

Railway engineers from India's South-Central Railway, headquartered in Secunderabad, say that by using the copper and optical fibre of the Indian Railway network, Internet and telecom services can be provided to about 4000 towns and 100,000 Internet connections in about two years, at barely Rs 15,000 (US\$350) per connection.

India has a teledensity (phones per hundred) of barely two, as against 50 in the Western world. This strongly affects the competitiveness of society.

But the major problem is that current costs of around US\$1000 (rpt US\$1000) to build infrastructure for a single line is simply too unaffordable here.

Once finance costs, operations, maintenance and obsolescence is taken into account, revenue of US\$300 per year is required from each phonenumber simply to break even. This is a price most in India cannot afford.

"In most developing countries, US\$300 per year for a telephone is accessible to less than five per cent of the population. How then can one hope for the development of telecom infrastructure and look for even some semblance of universal Internet access?" asks Dr Jhunjunwala, whose pioneering role in making telecom low-cost is widely recognised here.

Samudra Haque, a Minnesota-trained computer scientist who runs an ISP (internet service provider) in Bangladesh, has one unique solution for which he has just had a patent claim registered in Dhaka.

"We're combining the best elements of radio engineering, telecommunications and computer science to offer a high-speed communication network in remote rural villages (in Bangladesh) spread over large areas. And we are doing this with relatively small budgets too," Haque told this correspondent.

Using this method, 3 MBPS high-speed links are possible to villages, using wireless routers. He said 20-30 telephone channels and 20 video phone sets could be offered for a capital cost of US\$150,000 to villages which otherwise had no hope of being connected. "We aim to provide mega-bits, not just kilo-bits," said Haque, who says he was Bangladesh's first computer scientist in the 'nineties.

Said Prof. MGK Menon, India's former minister of state for Science and Technology: "Software share prices are zooming. This sector has the highest market capitalisation, and has created millionaires. But the country's policy makers can't be misled by that. Software and telecom must represent and improvement in the life of the people of the country. We can't be misled by the glitter we see in newspaper headlines." (ENDS)

Frederick Noronha is an Indian freelance journalist. He writes often on developmental themes and works from Goa, on the west coast of the country. He can be contacted via email at fred@vsnl.com or via phone at 0091.832.271490 or 278683.

CONTACTS TO ABOVE QUOTED SOURCES:

*Prof A Jhunjunwala
Commsphere 2000
Slum-children project
BytesForAll
Peter D. O'Neill
C.N.Krishnan
Rajeev Sangal, IIIT
Shyam Telecom
corDECT
Kumar Sivaraman, IISc
Samudra Haque*

*ashok@tenet.res.in
commsphere@tenet.res.in
Sugatam@niit.com
http://www.bytesforall.org
tweecsisbyt@gn.apc.org
cnkrish@vsnl.com
sangal@iiit.net
shyamtelecom@vsnl.com
dj@tenet.res.in
kumar@ece.iisc.ernet.in
haque@pradeshta.net*

NOTICES

OPPORTUNITIES

EFF Pioneer Awards
Toronto, Canada

DEADLINE: March 15, 2000

In every field of human endeavour, there are those dedicated to expanding knowledge, freedom, efficiency, and utility. Many of today's brightest innovators are working along the electronic frontier. To recognise these leaders, the Electronic Frontier Foundation established the Pioneer Awards for deserving individuals and organisations. The Pioneer Awards are international and nominations are open to all. The deadline for nominations this year is March 15, 2000.

The Ninth Annual EFF Pioneer Awards will be presented in Toronto, Canada, at the 10th Conference on Computers, Freedom, and Privacy.

INFO: Electronic Freedom Foundation

Email: pioneer@eff.org

Web: www.eff.org/pioneer

Aim for Arts
Vancouver, Canada

DEADLINE: 31 March, 2000

The Federation of Canadian Artists in partnership with AIM Funds Management is holding an International Competition Celebrating Artistic Achievement. International artists are encouraged to apply. The competition attracts cash prizes to the value of \$50,000 Canadian.

Info: Federation of Canadian Artists

Web: www.artists.ca



Still from a flash animation from the work "unputdownable" by Chris Caines. Image courtesy of Chris Caines.

**UNIDEE in Residence
Biella, Italy**

DEADLINE: 31 March, 2000

The University of Ideas (UNIDEE) is a centre which specialises in the research, production and promotion of creative ideas which further the interaction between art and humanitarian, scientific and social disciplines. UNIDEE are currently offering a 25 three month residencies in Italy, which provide infrastructure, support, and a highly creative environment for students and graduates from any field.

INFO: Fondazione Pistoletto

PH: +39-015-28400

FX: +39-015-2522540

Email: unidee@cittadellarte.it

Web: www.cittadellarte.it

2000 International Art Contest

Pymont, Australia

DEADLINE: 1 August, 2000

ArtDept, an online association of professional artists, is hosting it's third international free on-line competition. People vote for their favourites in four different categories and cash prizes are awarded to those who get the most quantity of votes through the year. The site is accepting submissions now.

INFO: ArtDept

Web: www.artdept.com.au

d>art oo

Sydney, Australia

DEADLINE: 31 March 2000

dLux media arts encourages and promotes the development and critical discussion of innovative film, video, digital media and sound arts in Australia, and exhibits this work to diverse audiences nationally and internationally.

d>art is Australia's premier annual showcase of international experimental film, video, animation, cd-rom, web and sound art. d>art is included each year as part of the Sydney Film Festival, Australia's most prestigious international film event. A component of the program is then exhibited at other key festivals and galleries throughout Australia and overseas. selection criteria: d>art oo is open to all Australian and international artists, art works should be recent (preferably completed after 1 January 1999), art works should be innovative / experimental / radical / challenging / unexpected, film / video / sound art works should be less than 15 minutes duration, works will be selected by a panel of representatives from the screen / audio arts sector. The closing date for entries is Friday 31 March 2000.

INFO: dLux Media Arts

Email: dLux@dLux.org.au

Web: www.dLux.org.au

**Ray Harryhausen Tribute Exhibition
Sydney, Australia**

DEADLINE: 31 March, 2000

With outstanding prizes sponsored by Trackdown Digital, Animal Logic, Alias Wavefront and Columbia Tri-Star HV, Silicon Pulp Animation Gallery is calling for entries of stop motion models and/or conceptual drawings and designs inspired by the work of Ray Harryhausen. Academy award winning stop motion animator and living legend Ray Harryhausen will be touring Australia in April/May 2000, as guest of the third Brisbane International Animation Festival.

The entries will be exhibited at the gallery during April 2000, and Mr Harryhausen will visit the gallery on Thursday 13 April to view and judge the models and artworks. Prizes will be awarded to winners in both Professional and Student categories.

Winner of the Professional category will receive three days audio post production studio time at Trackdown Digital, Camperdown, valued at approx. \$5000-\$6000.

Student winners will receive work experience at Animal Logic, ie one week in-house participation in the Animal Logic 3D department, plus Ray Harryhausen Videos and Maya Complete instructional video pack. Deadline for completed model and artwork entries is 31 March, 2000.

INFO: Jan Begg & Steve Lucas

PH/FX: 02 9560 9176

Email: anigal@siliconpulp.com.au

Webby Award

San Francisco Museum of Modern Art

DEADLINE: 14 March, 2000

The SFMOMA and the International Academy of Digital Arts and Sciences (IADAS) have created a new Webby Award to recognise and encourage artists working in online media around the world.

The SFMOMA Webby Prize for Excellence in Online Art will offer \$50,000 to an artist or artists for a body of work whose primary focus is to be experienced online and that explores and expands the distinctive capacity of the online medium. Winning artists will have their work exhibited in "e.space" SFMOMA's new online gallery, which was launched in mid-February 2000. Entries close on March 14, 2000. Winners will be announced at The Webby Awards 2000 on May 11 in San Francisco.

INFO: SFMOMA

Web: www.sfmoma.org

CYBERFEMMY Award

San Francisco Museum of Modern Art

DEADLINE: 14 March, 2000

After announcing the first annual SFMOMA Webby Prize for Excellence in Online Art, the San Francisco Museum of Modern Art (SFMOMA) and the International Academy of Digital Arts and Sciences (IADAS) have created an additional award, the CYBERFEMMY.

As the SFMOMA Webby Prize for Excellence in Online Art aims to honour the innovative work of net artists of all kinds, the CYBERFEMMY is addressed especially to projects with an explicit cyberfeminist orientation. The SFMOMA CYBERFEMMY Award for innovative cyberfeminist work will offer \$20,000 to a woman artist, woman theorist or woman activist (or a group) for a body of work whose primary focus is to be experienced on-line and that explores and expands the distinctive capacity of the on-line medium. Winners will have their work exhibited in a special women only "fem.space" on SFMOMA's new online gallery site, launched in mid-February 2000. Entries close March 14, 2000. Winners will be announced, together with the winners of The WEBBY Awards 2000, on May 11 in San Francisco.

INFO: SFMOMA

Email: drwatson@webbyawards.com

Web: www.sfmoma.org

Prix Ars Electronica of the ORF

Linz, Austria

DEADLINE: 27 March, 2000

Computer artists around the world are once again invited to send their works to Linz to compete for the Golden Nicas, Awards of Distinction and Honorary Mentions. The Prix Ars Electronica 2000 is announced internationally in the categories of .net, Interactive Art, Digital Music, Computer Animation and Visual Effects, and throughout Austria with the competition cybergeneration - uig freestyle computing. The exhibition Cyberarts 2000 during Ars Electronica will show a selection of the prize-winning works from all the competition categories at the OK Centre for Contemporary Art. During the Ars Electronica Festival, the prize-winners from each category will present their works in public lectures and discussions. In addition to presentations at the festival, the Prix Ars Electronica is documented with the book "Cyberarts 2000", with videos, CD, CD-ROM and via Internet. We look forward to your participation in the Prix Ars Electronica 2000!

INFO: Dr. Christine Schöpf

Web: http://prixars.orf.at

Visiting Artist Positions

California Institute for the Arts, USA

DEADLINE: 15 April, 2000

The California Institute for the Arts has two positions available: One year long position starting from September 2000 to May 2001 and a second position for one semester only. Applications are invited from artists/(and or) theorists/(and or) historians whose practise has an emphasis in photography, media, and/or related theories. Responsibilities include two courses per semester, supervision of independent study projects, participation in student reviews, and student advising at both the undergraduate and graduate level. Significant record of exhibition or production, ability to address range of media and all levels of practice.

INFO: Natalie Bookchin

Email: bookchin@calarts.edu

**Franklin Furnace Fund for Performance Art
New York, USA**

Deadline: 1 April, 2000 (postmark date)

With support from the Jerome Foundation and the New York State Council, The Franklin Furnace Fund for Performance Art awards grants of \$2,000-\$5,000 to performance artists, allowing them to produce major works anywhere in the State of New York. Artists from all areas of the world are invited to apply.

Franklin Furnace offers an honorarium and a month-long residency for producing temporal artwork (internet-oriented) in its Emerging Performance Artists series at Parsons School of Design's Design and Technology Department. Franklin Furnace arranges the residency (each artist is paired with MFA Design and Technology students), technical equipment, technical assistance, and publicity. Performance artists who are interested in developing new art for the Internet are encouraged to apply.

INFO: Franklin Furnace Fund

PH: + 212.766.2606

FX: + 212.766.2740

Email: info@franklinfurnace.org

Web: www.franklinfurnace.org

**International Art/Science/Strategy/Tactics In Residence
Program**

Projekt Atol - Pact Systems

MAKROLAB - Rottneest Island, Western Australia,

25.2.2000-25.4.2000

Projekt Atol offers four 17 days residencies at the MAKROLAB in the period from February 25 until April 25 2000. The MAKROLAB mark II is located on Rottneest Island off the coast of Western Australia and is part of the #home# project, organised by the Art Gallery of Western Australia and the Perth Festival 2000.

MAKROLAB is equipped with the standard setup of electronic and analogue research tools, and is connected to the matrix through a microwave link and equipped for transmitting signals on HF, VHF, UHF and Ku band ranges and receiving signals in the ranges of 0.1-2000 MHz and in the C and Ku bands.

The aim of the residency program is to provide artists, activists, writers, scientists, engineers and strategic and tactical information analysts with space and facilities to interact with the global systems of telecommunications, weather, and migrations and give them opportunity to fully concentrate on their work and interact in a creative and challenging dialogue with other members of the crew. The duties of the participants are to fully take part in the MAKROLAB DTOA (daily tasking orders activities), which include two daily video conferences with the interested audience and observers, systems management, repair and overhaul, and to write a comprehensive diary of their daily work, schedule and to publish their results on the MAKROLAB website. All personal produced material remains ownership of the participants, but the participants have to agree to share all the material with the MAKROLAB project and crew.

Participants will work and live in a very small, concentrated and challenging environment. Each chosen participant will be provided with half economy airfare to Australia and back and visa support and transportation to and from the island. Each participant should pay a fixed ML environmental and systems tax of 500 Australian dollars. Tax waivers are available for certain specific cases (explain the reason). The maximum baggage allowance is 30kg and maximum personal equipment power rating should not exceed 400W in total. It is encouraged that participants bring their own networkable (UTP LAN) computers, preferably notebooks. The average daily temperature on site will be around 32 degrees Celsius, so adequate clothing is a must. Interested participants are strongly encouraged to seek funding in art foundations and organisations in their respective countries. Contact Trevor Smith for more information about applying.

INFO: Trevor Smith, AGWQ

Email: tsmith@artgallery.wa.gov.au

Web: <http://makrolab.ljudmila.org>

CALLS FOR SUBMISSIONS

**ISEA2000, 10th International Symposium on Electronic Art
Paris, France**

DEADLINE: April 15, 2000

ISEA is committed to interdisciplinary and cross-cultural communication/cooperation between the arts and the fields of technology, science, education and industry. With "Revelation" as its theme, ISEA2000 will focus on new means of representation, and will explore the effects of the technological revolution on art and society: digital images, virtual realities, multimedia, interactive installations, networks etc. ISEA 2000 "Revelation" will put into perspective the transformations undergone by different artistic disciplines: fine arts, theatre, music, film and video, architecture, design, fashion. It will attempt to understand how new information and communication technologies produce means of expression unique to digital civilisations.

ISEA2000, the International Symposium is oriented towards professionals in the arts and new media (creation, production, publishing and broadcasting electronic arts), students, teachers, researchers, as well as the general public who are invited to attend concerts, performances, electronic theatre, "street scenes" (outdoor activities), and exhibitions.

ISEA2000 aims to represent the diversity of those engaged in new media, and encourages submissions from artists and researchers from cultural groups that have been traditionally under-represented at global events and previous ISEA Symposia.

In April 2000, an international programming committee comprised of professionals working in art, culture and research will select the projects chosen to be part of ISEA2000. These works will concern the following themes: digital art, interactivity and generativity, transmitters of new forms, and new arenas of revelation.

Submissions are invited in the form of papers, panels, poster sessions, workshops and institutional presentations. The deadline for all submissions is April 15, 2000.

INFO: Atelier d'ART3000 - ENSCI

E-Mail: isea2000@art3000.com

Web: www.art3000.com

Media Technology / Art / Media Mentality

Pro@Contra - MachineMachy, Moscow

DEADLINE: April 10, 2000

Total technologization has embraced all life spheres of contemporary society. The very logic of technological development directed to progress and innovation might seem to be pursuing and positively affecting culture and art that more and more often address technology services. Nevertheless, their counteraction brings to life many contradictions, due to principal difference in methodological systems. Within this symposium, we're planning to sharpen attention on dual aspect of the 'new technology' notion in the light of functioning of contemporary culture and art in a new informational space.

New technology bears a positive aspect of what we call should the progress. This notion includes political, economic, social and cultural factors. On the other hand, we could witness that new technology development provokes the situation of devaluation. In this case, technology becomes repressive, in respect to traditional values of culture, society, economics and politics. As a result, an active transformation of traditional culture into new representative forms occurs, evoking both well founded and not grounded criticism.

On the whole, this position is based on the state that technological progress does not affect essential and traditional interests of art and culture.

Thus, a dual evaluation of this problem contains both 'pro' and 'contra' opinions.

And theorists and practitioners expressing different opinions (positive and negative, pro@contra) on the problem will take part in discussions. The deadline for art projects (video art, CD-ROM, DVD) for the International Festival of Net Art is April 10, 2000.

INFO: Moscow MediaArtLab

PH: 7 095 151 8706

FX: 7 095 151 8816

Email: newart@aha.ru, shishko@transts.ru

Web: www.sccamocow.ru/lab/

Special Issue of The Information Society - Time and

Information Technology

Middlesex, UK

DEADLINE: June 26, 2000

The Information Society (TIS) invites authors to submit papers for a special issue on the topic of "Time and Information Technology". This special issue of TIS hopes to further research and discussion on time and information technology by publishing papers on aspects of this theme from diverse viewpoints.

Topics of interest include but are by no means limited to: information technology and the social construction of time, virtuality and temporality philosophy of time and information technology, polychronicity, monochronicity and information technology, ethnographic studies of temporal behaviour in cyberspace, temporal implications of IT/IS generated organisational change, the internet and new time keeping systems, history of time, horology and information technology, the politics of time with relevance to information technology, time and communication behaviour, electronic commerce and consumers' time, discourses of time (saving/gaining time, historical and future orientations, etc.).

Papers of empirical research (either qualitative or quantitative) are welcomed as are theoretical papers that provide new insights or state of the art reviews that cover diverse disciplines.

INFO: Heejin Lee

PH: + 44-1895-274000

FX: + 44-1895-251686

Email: heejin.lee@brunel.ac.uk

Web: www.slis.indiana.edu/TIS/

Fourth Werkleitz Biennale

Tornitz, Werkleitz and Calbe/Saale, Germany

DEADLINE: 15 April, 2000

The Werkleitz Biennale is a border crossing international forum for media and art with a special focus on new artistic ways of expression and techniques as well as projects with research character.

The fourth Werkleitz Biennale "real[work]" will take place 5 - 9 July 2000 in Tornitz, Werkleitz and Calbe/Saale, Germany. Invited curators will select works in the fields of visual arts, film/video, performance art and internet/multimedia (Netart).

Netart entry categories include visualisation, sound/music, 3D, interaction/interface, communication and games. The work must be presentable on a standard multimedia PC running Netscape/Explorer with Java, Cosmo player, Soundblaster/speakers, mouse, keyboard, video-camera and an ISDN-Internet connection. Out of the entries, up to 10 works will be selected by the curator, until 30 April, 2000 and selected artists get a compensation of DM 1000 for the realisation of the work. Travel and accommodation is paid to come to Werkleitz for an exhibition of the work during the festival (5 - 9 July 2000).

INFO: Benjamin Heidersberger

Web: www.werkleitz.de/realwork

Email: benjamin@ponton.de

The Thematics of Art, Science and Change in the Twenty-First Century.

London, UK

DEADLINE: 3 April, 2000

A one-day conference on Saturday 27 May, 2000 at the School of Arts and Humanities of the University of North London on the relationship of Art and Science and the Depiction of Science in Narrative and Cultural products.

Organised by The London Network for Modern Fiction Studies in conjunction with the University of North London this one-day conference considers broadly issues of Culture & Science, and Science and the Arts.

The conference attempts to explore a variety of aspects concerned with these themes and the general relationship of narrative, depiction and theory with images and knowledge of science. Interdisciplinary, textual and theoretical contributions are particularly welcome, but clearly the range of subject areas relevant to the day would be plural. The following is suggestive rather than inclusive: the so-called hard sciences, mathematics, social sciences, political sciences, neurosciences, psychology, cultural studies, literary theory, textual exegesis, film studies, philosophy, the philosophy of science etc. The deadline for submissions is Monday 3 April, 2000.

The range of topics and/or panels might include: philosophy of science, the logic and implications of chaos, complexity theory, authorising science - telling the tales of scientific experiment and development, facts as fictions, science and narrative, the psychoanalyst as narrative presence, the literary mind/the brain as text, neuroscientific stories, bio-poetics and bio-aesthetics, fictions in science, science fiction and the ongoing development of technology, mad scientists, body snatchers and intellectuals.

INFO: Dr. Philip Tew

PH: 0956 951930

Email: tewp@clara.net

Antithesis

Melbourne, Australia

DEADLINE: 28 March, 2000

Antithesis is an interdisciplinary journal of critical theory and creative cultural production. It is Australia's longest standing postgraduate journal and is published by University of Melbourne. Volume 11, 'SEX 2000' seeks to explore the various terrains through which 'sex' might remain or become both intelligible and possible. This project can be realised through a consideration of libidinal investments across visual and discursive practices, corporeal enactments and virtual identifications. Accordingly, these provisional locations will imply a constitutive and reflexive negativity or absence, in the form of banalities, repulsions and failures. Contributions may cover but need not be restricted to: fetishism, voyeurism, exhibitionism, commodification, choreographies, memories, auto-eroticism, psycho-sexual dramas, symbiotic freedoms and constraints, celibacy and promiscuity, the reception of embodied pornographic texts, cross-dressing, flirtation, digitalisation.

'SEX 2000' seeks critical articles, essays, reviews, photography, visual art, fiction, and poetry. Papers should be no longer than 6000 words, and works of fiction up to 2000 words.

INFO: _antiTHESIS_

PH: 61 3 9344 5501/ 5506

Email: antithesis@english.unimelb.edu.au

Third Berlin Internet Economics Workshop Berlin, Germany.

DEADLINE: 17 March, 2000

The Berlin Workshop on Internet Economics provides a forum for researchers and practitioners who are interested in and working on economic aspects of the Internet. The first workshop took place in October 1997 with world-wide participation by people working on Internet-related topics in industry, universities and government institutions. A selection of workshop papers has been published in various volumes of Netnomics.

For the third workshop we invite submissions of extended abstracts. In particular we encourage recently graduated students to contribute with a submission.

Topics of interest for the workshop include but are not limited to: economics of the Internet infrastructure (eg., pricing and capacity issues in packet-switched networks, congestion charges, Internet interconnection strategies), economic issues of content and service provision, economics and pricing of digital goods, regulation and taxation of the Internet and electronic commerce, economics of convergence between Internet and other media, business strategies for the Internet age, economic aspects of electronic payment systems, consequences of the Internet for the "real" economy, empirical analysis of new data sources (eg., log files) microeconomic models for electronic markets (eg., agents).

INFO: Thorsten Wichmann

Email: ieuw@berlecon.de

Blackchair Productions' Independent Exposure Program Seattle, USA

DEADLINE: ongoing

Blackchair Productions is accepting short video, film and digital-media submissions of 30 minutes or less on an ongoing basis for their monthly screening program called Independent Exposure. 2000 is the fifth year of the program and we want to include you in the show! Artists will be paid an honorarium and will qualify for a non-exclusive distribution deal, which will include additional license fees for international offline and online sales! We are looking for short experimental, narrative, alternative, avant-garde, humorous, dramatic, erotic, subversive, animation and underground works. Works selected will, in most cases, continue on to national and international venues for additional screenings and may qualify for our DVD/VHS home video compilations as well as Netcasting via our microcinema.com website. Submit a VHS/or S-VHS (NTSC preferred) clearly labelled with name, title, length, phone-number along with any support materials including photos! Due to the large amount of entries, we are unable to return your submission(s). We will get back to you! Send submissions to: Blackchair Productions, 2318 Second Avenue, PMB 313-A, Seattle, WA, 98121, USA.

INFO: Joel S. Bachar

Email: info@microcinema.com

Web: www.blackchair.com

**Cyberslag Foundation/Open Electronic Festival
Groningen, The Netherlands**

DEADLINE: Varies

The Open Electronic Festival is an annual multiple-day event that focuses on electronic music and media art. The festival is organised by the Cyberslag Foundation (grounded in 1998), and takes place in the City of Groningen, The Netherlands. Besides organising the festival the Foundation also organises concerts and exhibitions throughout the year on several locations in Groningen.

The main focus of the Cyberslag Foundation is to present an overview of both traditional and actual developments in the electronic arts. We are internationally oriented and are interested in a wide variety of electronic art forms. This means the Foundation's philosophy covers an area that (roughly) results in a profound interest for the following genres: works for tape, electro-acoustic music, acousmatic music, computer-generated music, live electronic music, techno and other dance-oriented music, musique concrete, soundscapes, multimedia works and improvised music with electronics.

For our third festival (December 2000), plus other events (October 1999-October 2000), we're looking for artists who might be interested to be part of the program. The deadline for separate events in the October 1999-October 2000 period is flexible. Contact us for detailed information.

The deadline for the December 2000 festival is set for May 31, 2000. Recordings (CD, tape, MD, vinyl, VHS pal/ntsc), biographies and other information can be sent to: Cyberslag Foundation/Open Electronic Festival, Jeroen de Boer/music director, Munnekeholm 10, 9711 JA Groningen, The Netherlands.

INFO: Jeroen de Boer
PH: 0031 (0)50-3637513
FX: 0031 (0)50-3632209
Email: J.T.de.Boer@let.rug.nl
Web: www.cyberslag.com

**M/C - A Journal of Media and Culture
University of Queensland, Australia**

DEADLINE: Ongoing

The University of Queensland's award-winning journal of media and culture, M/C, is looking for new contributors. M/C is a crossover journal between the popular and the academic. Initiated by cultural critic David Marshall and supported by a variety of contributors from the University of Queensland and elsewhere, it is a journal that is set to be a premier site of cultural debate on the Net. M/C issues are each organised around a theme. Future issues will deal with concepts such as 'audience', 'culture', 'speed', 'chat', and 'game'. For these issues, we're looking for article contributors — please contact us for more info.

INFO: M/C
Web: www.uq.edu.au/mc/

**International Workshop on Advanced Learning
Technologies (IWALT 2000)**

Palmerston North, New Zealand

DEADLINE: 2 June, 2000

The International Workshop on Advanced Learning Technologies (4-6 December 2000) will bring together researchers academics and industry practitioners who are involved or interested in the design and development of advanced and emerging learning technologies. Understanding the challenges faced in providing technology tools to support learning process and ease the creation of instruction material will help building a direction for further research and implementation work. The focus of the workshop is on the design and development issues of advanced learning technologies. The topics of interest for the workshop include but are not limited to Architecture of learning technology systems, advanced uses of multimedia and hypermedia, integrated learning environments, application of artificial intelligence tools in learning technology, application of metadata, agents technology, practical uses of authoring tools, virtual reality, teaching/learning strategies, collaborative learning/groupware, adaptive and intelligent applications, internet based systems, application of instructional design theories and evaluation of learning technology systems. Papers are due on 2 June, 2000. Contact the organisers prior to submitting your paper to get hold of submission guidelines.

INFO: Chris Jesshope (General Chair)
PH: +64 6 350 5799 Ext 2467
FX: +64 6 350 2259
Email: C.R.Jesshope@massey.ac.nz
Web: http://ltf.ieee.org/iwalt2000/

**Multimedia Labs Program
London, UK**

DEADLINE: 23 March, 2000

Multimedia Labs have already enabled dozens of creative professionals to develop potentially strong, innovative concepts for interactive media into compelling commercial propositions. Each LAB represents ten days of intense experimentation and creativity in a relaxed, well-supported and professional environment - a chance to present ideas and explore the practical development of multimedia products for international markets. Participants come from all disciplines - scriptwriting, graphic design, programming, journalism, performance art, theatre, TV production, musical composition and sound recording. The range of subjects covered is enormous: fiction and non fiction, screen based work and interactive installation, games, web products, interactive TV programs, new musical forms and 3D animation work. At the end of each Lab, commissioners, publishers and developers active in the European multimedia industry are invited to attend work-in-progress presentations given by the participants, with a view to potential development and investment deals being struck.

Multimedia Labs represents, a coming together of diverse talents - a hothouse of multimedia ideas that commercial broadcasters, publishers and developers can benefit from enormously

While we will consider almost any original, creative, interactive digital media project we do have some specific priorities this year. We are particularly interested in projects which explore the relationship between broadcast and interactive, 'enhanced' or interactive television, we would like to involve some games developers in the Labs, and we'd like to make connections between creative developers from different backgrounds and with complementary skillsets: to act as a catalyst for 'dream teams'. Contact the organisers for information regarding submissions.

INFO: Frank Boyd
PH: +44 207 687 6060
FX: +44 207 687 6061
Email: frank@artec.org.uk
Web: www.mmlabs.org

**Third Annual Workshop and Minitrack on Persistent
Conversation
Maui, Hawaii**

DEADLINE: 1 April, 2000

This minitrack and workshop will bring designers and researchers together to explore persistent conversation, the transposition of ordinarily ephemeral conversation into the potentially persistent digital medium. The phenomena of interest include human-to-human interactions carried out using email, mailing lists, news groups, bulletin board systems, textual and graphic MUDs, chat clients, structured conversation systems, document annotation systems, etc. Computer-mediated conversations blend characteristics of oral conversation with those of written text: they may be synchronous or asynchronous; their audience may be small or vast; they may be highly structured or almost amorphous; etc. We are seeking papers that address these issues. Contact the organisers for more information.

INFO: Tom Erickson
Email: snowfall@acm.org
Web: www.pliant.org/personal/Tom_Erickson/
HICS534pc.html

**Virtual Society? Get Real!
Hertfordshire, UK**

DEADLINE: 22 March, 2000

The last few years have seen a burgeoning awareness of the potential impact of new electronic technologies. We recognise the crucial need to understand the social circumstances which can realise technological benefits, to temper cyberbole with social scientific research. Frameworks have been developed to help us ask: to what extent are significant changes in the ways we interact, relate to each other and organise ourselves associated with the new technologies. So what now are the prospects for a "virtual society"?

This major international conference is being held to reflect on the current state of the art. It marks the culmination of two years research under the UK's ESRC Program: Virtual Society? the social science of electronic technologies. The conference brings together researchers working both in and beyond the VS? Program. The aim is to take stock, to reflect on the wider perspective and to identify the best ways forward. The conference will cover accommodation and travel costs (with a contribution towards travel costs for overseas participants), although places are limited. Deadline for paper abstracts (500 words) is 22 March 2000; registration deadline is 29 March 2000.
INFO: Caroline Ingram
PH: +44 (0)1895 203210
FX: +44 (0)1895 203071
Email: caroline.ingram@brunel.ac.uk
Web: www.brunel.ac.uk/research/virtsoc

**OZCHI 2000 - Interfacing reality in the new millennium
Sydney, Australia
DEADLINE: 29 March, 2000**

OZCHI is the annual conference for the Computer-Human Interaction Special Interest Group (CHISIG) of the Ergonomics Society of Australia, and Australia and New-Zealand's leading forum for work in all areas of Human-Computer Interaction.

OZCHI attracts an international community of researchers and practitioners with a wide range of interests, including human factors and ergonomics, human-computer interaction, information systems, software engineering, artificial intelligence, design, social sciences and management.

Original papers, posters and proposals for the doctoral consortium are solicited, as well as demonstrations and proposals for half-day and full-day workshops and tutorials. In keeping with the theme: Interfacing Reality, special emphasis will be placed on issues of accessibility and on novel interfaces, including electronic communities, ecommerce, accessibility issues, pervasive and invisible computing, WAP and portable computing, useability and fun, useability in game applications, augmented reality, remote work and working in 3D.

INFO: Well Done Events
Email: Ozchi@welldone.com.au
Web: www.cmis.csiro.au/ozchi2000/

**COMTEC art 2000
Dresden, Germany
DEADLINE: 30 April, 2000**

The invitation for entries has been introduced for the fourth trade fair for computer-assisted art and interdisciplinary media projects in Dresden that will be taking place from October 19 until November 26, 2000. The media art festival provides artists from all over the world with a podium for presentation and interchange. Current internet projects, computer-assisted installations, performances, film productions, graphics and sound projects may be handed in until April 30, 2000.

Scheduled from October 19 to November 26, 2000 the COMTEC art 2000 will be presenting new media projects on this basis at the Kunst Haus Dresden and in other locations. For the first time the European Workshop for Art and Culture in Hellerau near Dresden will be participating as an organiser of about 15 additional events. In preparation for the festival an international summer course on the topic "Body-Computer-Interaction" will be held in Hellerau. This year's COMTEC art symposium with the topic "Art and Media Technology" will be dealing with cultural, social and political consequences of the digital media expansion. For more information contact the organisers.

INFO: Dr. Klaus Nicolai
PH/FX: 0351/ 34 000 33
Web: www.body-bytes.de

**Women's Studies Quarterly - Special Issue on Technology and Women
New York, USA
DEADLINE: 1 June, 2000**

Since 1972, Women's Studies Quarterly has been the leading journal in teaching in women's studies. Thematic issues feature vital and accessible material for a broad audience of readers: anyone engaged in education, research, or feminist action, and interested in the impact of new scholarship on women and the curriculum. Recent scholarship, in jargon-free language, combines with classroom aids such as course syllabi, discussions of strategies for teaching, and up-to-date bibliographies, as well as hard-to-find or never-before-published documents and literary materials. WSQ is committed to publishing international perspectives and to exploring the intersections of race, class, and gender. A peer-reviewed, theme-based journal, WSQ is published twice a year in double issues compiled by distinguished guest editors. For a special issue on technology and women, WSQ invites submissions that focus on information and biological technologies, with emphasis on questions of gender discrepancies, technological determinism, and potential for progressive social change. The editor seeks essays, perspective pieces, poetry, art work, bibliography, filmography, syllabi, book reviews, and other works that explore whether the new technologies advance or impede women's equality around the world.

INFO: Lee Quinby
Email: leequinby@aol.com
Web: www.feministpress.org.

FORTHCOMING EVENTS

**Information Mapping at Rhizome.org
Tuesday, March 14 8 pm**

New Langton Arts 1246 Folsom Street, San Francisco

On Tuesday, March 14 at 8 pm, "Information Mapping at Rhizome.org" kicks off Langton's REALLY WIRED, an ongoing series of public forums that address the matrix of art and new technologies.

Audience members can pump themselves up with coffee and donuts while artist Alex Galloway discusses two of his interface art projects, "Starrynight" and "Spiral," both of which creatively map the information in the Rhizome archive at <http://www.rhizome.org>.

Langton's REALLY WIRED series brings professionals from a variety of disciplines together to discuss art in our digital age. The program will don a few different hats; three types of events will create a balanced program and offer audiences different types of engagement with the speakers. In the first, represented by "Information mapping at Rhizome.org", Langton will invite prominent artists, researchers, designers and theorists to give lectures or presentations that explore the relationship between artists, audiences and technologies. The second REALLY WIRED format is an informal gathering to foster conversation. Another REALLY WIRED will take the form of an artist talk. The artist featured in Langton's Internet exhibition program NetWork will present his or her work and discuss the artistic issues being addressed.
INFO: New Langton Arts
PH: 415 626 5416

**Performing Virtualities
2-3 May 2000
CRICT, Brunel University, UK**

In the rapidly changing field of new technologies, from the internet to highstreet banking facilities, much is made from notions of the virtual, the real and the performance of both. But what can be said to be real or virtual, how can such a distinction be drawn and who is able to make these arguments?

The key challenge of this postgraduate workshop is to take up knowledge and knowledge production as fields in which to scrutinise notions of 'the virtual' and 'the real'. More precisely, questions must be asked of how the virtual as well as the real are performed in relation to technologies, our use and understanding of them. The workshop will look at how different knowledge claims might be associated with the virtual and the real in particular situations. By focusing on discussion and exchange, this postgraduate workshop hopes to stimulate and help the participants in their own work. It is designed to be intensive and diverse and thus requires a small, interdisciplinary group (there are 40 places available).

INFO: Andrea Buchholz and Daniel Neyland
Email: performing-virtualities@brunel.ac.uk
Web: www.brunel.ac.uk/research/virtsoc/events/performing.htm

**Monomedia Berlin: value
12 - 14 May 2000**

Berlin University of the Arts, Germany

The first large-scale international conference on new media and cultural challenges will take place at the Berlin University of the Arts (HdK) under the heading Monomedia Berlin: value.

Monomedia Berlin sessions include: new economy, new relationships through new media, value added through design and new media and society.

INFO: The Monomedia Team

Email: monomedia@hdk-berlin.de

Web: www.monomedia.hdk-berlin.de

CREATE Australian National Conference

6 - 7 April, 2000

Melbourne, Australia

Eminent British filmmaker and the producer of *Chariots of Fire*, *The Killing Fields*, *Local Hero* and *Midnight Express*, Lord David Puttnam, will deliver the keynote address at CREATE Australia's third national conference. In the Spotlight, to be held at the Victorian Arts Centre on April 6-7, 2000. Timed to coincide with the Melbourne International Comedy Festival, the conference will examine the theme "valuing the arts" from a variety of perspectives - education, community, business and government. It will also explore topical issues of Australian culture and identity.

Other confirmed speakers include Martin Portus, Arts Today presenter and Sandra Yates, Chair of Saatchi and Saatchi, discussing media and the arts and Jock McQueenie, arts and industry broker who'll examine how creatively trained people can benefit the corporate sector. The conference multimedia kiosk, will showcase leading on-line training resources and cultural websites. As an adjunct to the kiosk, the virtual gallery, a permanent on-site multimedia exhibition will display the latest in digital art. Up to 250 delegates are expected to attend what has emerged as Australia's pre-eminent arts training and education conference.

INFO: Suzanne Henderson

PH: 02 9211 5342

Email: create@createaust.com.au

EC-Web 2000

4 - 6 September 2000

Greenwich, UK

The growth of the Internet has dramatically changed the way in which web data is managed, accessed and used commercially to conduct business electronically. Thus, WWW, a distributed global information resource, is not only important to individual users, but to business organisations.

The main objective of this conference is to bring together researchers from different disciplines, developers, and users all interested in electronic commerce and web technologies and to assess current methodologies and new research directions. Although a natural focus will be on computer science issues, we expressly welcome technical research contributions from economics, business, law, and other relevant disciplines. The conference will be organised as a two track conference: E-commerce and Web Technologies.

INFO: EC-Web 2000

Web: www.dexa.org/ecweb

The 14th Annual Convention of the SLS

5 - 8 October, 2000

Atlanta, USA

The convention will be held in Atlanta, Georgia, 5-8 October, 2000, at the Sheraton Colony Square Hotel. The conference is sponsored by the Ivan Allan College of Georgia Institute of Technology, the School of Literature, Communication and Culture, and the Centre for New Media Studies.

The theme of the 2000 conference is Media: Old and New. Scholars working in New Media, including digital performance and other forms of digital art are particularly encouraged to attend.

INFO: Hugh Crawford

Email: Hugh.Crawford@lcc.gatech.edu

Web: <http://sls2000.lcc.gatech.edu/>

FESTIVALS/SYMPOSIA

Futuresonic

8 - 10 June, 2000

Manchester, UK

After a three year wait since their last major soiree, Futuresonic has been re-launched as an annual festival of sonic and digital arts in Manchester, to take place from 8-10 June 2000. The event will be staged at the newly opened Contact Theatre and other venues across the city. Contact Futuresonic for more information.

INFO: Futuresonic

Email: 2000@futuresonic.com

Web: <http://futuresonic.com/>

EXHIBITIONS

Exhibitions at the Australian Centre for Photography

17 March - 15 April, 2000

Sydney, Australia

CUPOLAS by David Stephenson

For centuries the dome has symbolised the hemisphere of the heavens. At its apex is the oculus. As a point of view for the all-seeing 'eye of god' it suggesting the panopticon, in which actions are controlled by the gaze. As a window on the infinite cosmos - eternity. David Stephenson has photographed the lavish ornament of many scores of such domes creating a sweeping taxonomy of virtual heavens - a typology of cupolas.

LIQUID SCRUTINY by Rebecca Cummins

Contrasting with the god's-eye-view of David Stephenson's Cupolas, Rebecca Cummins' Liquid Scrutiny is a playful tool for the surreptitious gaze. The artist's witty constructed 'paranoiac dinner party' implicates the viewer in the seduction of secretive surveillance and, through the direct experience of optical principles, the delight in viewing the real world as representation.

BAROCCOCONTINUO by Stephen Roach

This exhibit unfolds around three distinct sites: a garden, an open-air theatre and the family house of the last baroque painter to the Bourbon court in Naples.

Rather than document each location, the photographer has created hybrid panoramas constructed from fleeting glimpses, which play on the excessive, sensual and unclassical nature of the baroque.

INFO: Francisco Fisher

Email: program@acp.au.com

Exhibitions at Artspace

March, 2000

Sydney, Australia

Ecce homo: These are our bodies, this is our blood - A Pope Alice event

Ecce homo: These are our bodies, this is our blood is a contemporary assessment of Christian dogma and attitudes towards homosexuals and lesbians over the last 2000 years. The installation of a 'table vivant', covered in glasses of wine and loaves of bread, is a tribute to the ongoing struggle for acceptance by the homosexual community, and a reminder of the physical cost of standing outside the 'norm'. Pope Alice will grace the opening with her presence in order to bless the wine and bread at this alter of celebration of 2000 years of homosexuality.

Thin Wall PB/I-S - Dani Marti

This conceptual installation addresses a turning point in the AIDS crisis. It incorporates functional, everyday materials between which there is a strong dialectical relationship: red scourers that speak of porosity, absorption and cleanliness, but also of blood, danger and chaos; red reflectors that speak of danger and direction. The pervasiveness of the colour red gives a sense of stress to the installation, but at the same time the creation of and subsequent performance involving the work is a meditative process through which Marti hopes to embrace the fear surrounding the progression of the HIV virus in the body's blood cells, as well as mirror it.

Personal Eugenics - John Tonkin

Who said self-improvement had to be hard work? Now you can change yourself with just a few clicks of the mouse! ... While the science of eugenics brings to mind the excesses of the Nazis, it manifests itself today in emerging biotechnologies. The third in a series of web based works informed by the 'enlightened' sciences of physiognomy, anthropometry and eugenics, *Personal Eugenics* consists of an interactive installation that allows the user to upload an image of their face onto the web together with a description of the type of person they would like to be. They, and other users, can then evolve the image to fit the description.

Reading Matter - Per Huttner

Swedish installation artist Per Huttner presents two video works related to issues of gender, the body and the search for knowledge. In a provocative and humorous way, the pieces examine pornographic material and the male's self proclaimed dominance in the history of intellectual knowledge.

INFO: Artspace

PH: +61 2 9368 1899

FX: +61 2 9368 1705

Email: artspace@artspace.org.au

Web: www.artspace.org.au/

The Universal Page

Natalie Bookchin and Alexei Shulgin

Online: <http://universalpage.org>

The Universal Page is a pulsating, living monument commemorating no single individual or ideology but instead, celebrating the global collective known as the World Wide Web. The Universal Page offers the world a once in a lifetime opportunity to join together in honouring and observing our networked past, present and future as it boldly initiates our entry into the new millennium.

The Universal Page is open for public viewing on the occasion of the Walker Art Centre exhibition "Art Entertainment Network/Let's Entertain". Funded by the Jerome Foundation and the Walker Art Centre, the project was first envisioned and is now being orchestrated by Natalie Bookchin and Alexei Shulgin. Both are artists, theorists of the Internet and professors of contemporary art and new media. Bookchin is an American based in Los Angeles, in the United States of America and Shulgin is a Moscow based Russian Artist. Programming: Alexander Nikolaev, Fund of Perspective Research, Moscow.

From my Perch

4 - 15 April, 2000

Sydney, Australia

The computer is much celebrated as a creative medium, yet opportunities to see new media art are rare. Coming up at Kudos Gallery, Paddington, is an exhibition of interactive multimedia works by Sydney artist Alyssa Rothwell. Rothwell is presenting her first solo exhibition, *From My Perch*, from April 4 to 15. *From My Perch* is the culmination of six year's work, resulting in three interactive computer-based "stories". Interactivity allows viewer involvement. Screens are designed to respond to viewers' choices as they click, drag and "roll" the mouse over images. Rothwell's use of interactivity heightens viewer experience by encouraging playful exploration. The viewer encounters elements of Rothwell's stories by controlling the sequence and pace of their experience with the cursor.

INFO: Kudos Gallery

PH: 02 9571 9959

Net Composition and Culture Map

Online: <http://www.turbulence.org/>

CultureMap is a visualisation of proportion, disproportion, direction, and indirection in the content and no-content of the World Wide Web portals. Taking the most common starting-point categories (eg. Business, Autos, Entertainment), CultureMap samples a variety of search engines to build an illustration of the prevalence of each term in the pages of the Web. Visitors substitute their own top-level terms, trying alternative portal categories, some of which may reflect more accurately the content of the Web.

Joining abstract design with representation of the information landscape, the CultureMap depicts the evolution of Web content in the form of a dynamic colour composition. Over time the shifting composition of available information will be visible as a time-lapse movie.

Skyhammer

17-19 March, 2000

Sydney, Australia

De Quincey etc present Skyhammer - a performance installation, to take place at the Performance Space for three days only. Includes a live web installation (Laura Jordan and Michael Schiavello), poems and text (Martin Harrison), portrait of the unknown (Pam Lofts), stories (Julia White), photographic installation (Juno Gemes) and more. Contact the Performance Space for further details.

INFO: Performance Space

PH: (02) 9698 7235

ONLINE PUBLICATIONS/RESOURCES

**Switch - the New Media Art Journal of the CADRE Institute
San Jose State University, USA**

Online: <http://switch.sjsu.edu>

The latest issue of Switch is now online. Steve Cisler, data traveller, activist and former member of the Advanced Technology Group at Apple Computer, takes the reader on a journey that exposes how trade networks impinge upon the world of crafts, collectables, and tourist trinkets. Artist and former Silicon Graphics marketing manager for European operations, Frank Dietrich, expands upon his seminal 1986 essay "Digital Media: Bridges between data particles and artefacts". In *Memory_Archive_Database*, Steve Dietz, the new media-curator for the Walker Art Centre, gives his perspective on database as art form. This is done from his unique position inside one of America's most renowned and progressive art institutions. Also, Inna Razumova interviews new media theorist and scholar Lev Manovich, whose writing on database has become extremely influential in the network art world. Paula Poole presents a collection of interviews taken from participants in the openX symposium at Ars Electronica 1999, including, among others, Mark Tribe, Rachel Baker, Olia Lialina, and RTMark.

Riding the Meridian: Women and Technology

Online: www.heelstone.com/meridian/

The new issue of Meridian is now online. It contains a roundtable discussion with professors and theorists N. Katherine Hayles and Marjorie Perloff, Eastgate acquisitions editor Diane Greco and hypertext writers Shelley Jackson and Linda Carroli; a Progressive Dinner Party showcasing the work of 39 women who produce hypertext web work, created by contributing editors Carolyn Guertin and Marjorie Luesebrink, with commentary by N. Katherine Hayles and Talan Memmott.

Imaginary Realities

Online: <http://imaginaryrealities.imaginary.com>

The latest issue of Imaginary Realities is now online. It features a variety of articles on the history of online games, including muds, interactions with other players and stories, dealing with problem players, issues of identity and the mud player, along with an article on "how to find useful ideas to use on the internet."

Media-Culture List

Online: <http://www.onelist.com/subscribe/media-culture>

The Media-Culture List has emerged from the Media and Cultural Studies Centre at the University of Queensland and the affiliated active sites of the online journal M/C - A Journal of Media and Culture and its companion publication M/C Reviews. Our overall strategy is to move ideas outward so that they are not closeted in the academic specialisations that often consume and subsume those same ideas. We're interested in critical thinking and ruminations on a variety of topics that comfortably move between popular culture and critical thinking about those same phenomena. To participate and get the latest news about cultural and media events off- and online, join the Media-Culture List by going to <http://www.onelist.com/subscribe/media-culture> and following the instructions on screen.

Sponge Art

Online: www.spongeart.com.au

Sponge Art is an Australian online visual arts magazine which has been developed exclusively for the Internet. It aims to promote Australian Art at a local, national and international level. This project is directed by Misako Sugiyama, and edited by Benjamn Genocchio who leads a team of writers from within the visual art field including: Bruce James, Art Critic, The Sydney Morning Herald, Robert Nelson, Lecturer, Monash University and Arts Writer for The Age, Louise Martin Chew, Brisbane Art Critic, The Australian, Courtney Kidd, Arts Writer, The Sydney Morning Herald and Adam Geczy, Lecturer, Australian Catholic University. Sponge Art features reviews and previews of art exhibitions and major works; reviews of art books; information about the art market and a chatty segment on art schools. It also includes exhibitions by New Media Artists in the Virtual Gallery.

A DIGITAL REGION?

OPPORTUNITIES

Pan Asia Networking R&D Grants Program
International Development Research Centre, Canada
DEADLINE: March 31, 2000

The Pan Asia R&D Grants Program has the objective of building research capacity in the developing countries of Asia in the area of Internet networking. It is directed at encouraging original and innovative networking solutions to development problems in Asia. Grants for research and development projects are available to Asia-based organisations on a competitive basis. Preference is given to projects that focus on practical solutions to real problems in Internet technology applications and policies.

The Pan Asia R&D Grants Program is for project funding only, and may not be accessed to cover core or recurrent funding needs. Two types of grants are available: project grants for a maximum of \$75,000 CAD and small grants for a maximum of \$15,000 CAD. Funds are provided by the International Development Research Centre (IDRC) of Canada. The Program is overseen by a Committee established by IDRC and administered by the Canadian Centre for Occupational Health and Safety (CCOHS) on behalf of IDRC.

INFO: Pan Asia R&D Grants Program
Web: www.panasia.org.sg/

CALLS FOR SUBMISSIONS

Cultural Diversity in/and Cyberspace
University of Maryland, USA
DEADLINE: ASAP

As the Century turns, fundamental aspects of human experience including individual and community identity formation, the mind-body relationship, and the articulation and valuation of difference are becoming increasingly tied to our ideas of Cyberspace. Computer literacy, particularly in terms of the ability to access and use the Internet has become, on a global scale, another boundary separating the haves from the have-nots. And, while non-dominant groups have made some in-roads onto the information superhighway, these boundaries typically mirror existing borders of difference. To understand the meaning of race, gender, and ethnicity in the 21st Century, the project of examining and understanding cyberculture must be undertaken.

Proposals for panels and papers dealing with cultural diversity in/and Cyberspace are sought for this interdisciplinary conference.

Suggested themes include the construction of race in Cyberspace; barriers non-dominant groups face in obtaining Internet access; the construction of gendered, sexed, and virtual bodies; teaching issues of diversity and/with Cyberspace in the classroom; American/English hegemony of cyberspace; the study of online communities, particularly communities formulated around the articulation of difference.

INFO: Ed Martini
Email: emartini@wam.umd.edu

Multilinguae Congress.
San Sebastian, Spain (November 2000)
DEADLINE: 31 March, 2000

Papers and/or workshops (of up to 30-45 minutes duration) from academics, software and multimedia developers and distributors, experts in the digital distribution channel and information organisations (including libraries, government, and the private sector) are sought for presentation at the congress. All papers and presentations should be designed for non-specialist audiences, and connect theory and practice.

The general objective of the Multilinguae congress is to develop channels, links and activities between institutions representing similar collectives in different cultural and geographical areas where minority languages are spoken for interchange of experiences, best practices and for the realisation of joint actions with a view to promoting multimedia development and linguistic diversity. Abstracts of up to 500 words should be sent for consideration by the committee, by 31 March, 2000.

INFO: Jokin Garatea
PH: +34 943 31 66 66
FX: +34 943 31 10 66
Email: garatea@gaia.es

EXHIBITIONS

Forbidden Galaxy
Online: <http://alexunginor.com/forbiddengalaxy/03/>
Japanese based comic web gallery Comics Universe, has recently launched issue three of Forbidden Galaxy, an independent and cutting edge exhibition of web comics from around the world. This issue contains work from Wostok (Yugoslavia), Mauro Entrialgo (Spain) Mark Hendriks (Netherlands) and Caspar Williams (UK) amongst others. The on-line comics feature translation scripting, and the site itself can be read in English or Japanese.

Asia Society Exhibitions
New York, USA

The Asia Society Store is currently open and has a full stock of exceptional books and gifts from Asia. The exhibition "Spiritual Perfection" is also on view. A new season of Asia Society programs is also planned. Updated information is available by contacting the Asia Society.
Contact: The Asia Society
Web: www.asiasociety.org/about/

ONLINE PUBLICATIONS/RESOURCES

International Reporters Network
Online: www.drik.net/irn

Drik Multimedia is inviting third world writers, photographers, journalists and artists to fill in the network form at <http://www.drik.net/irn> and to join in the professional artists directory to be exposed to Scandinavian media. The aim of the project is to stimulate the use of quality photographic and other journalistic work from the South in the Norwegian media specifically and the Scandinavian media in general. We would like to register high calibre photo and text journalists from developing countries, and produce a directory of them (on Internet and print). Scandinavian media and publishing institutions. The listing is open to individuals, professional collectives and organisations, agencies and private/governmental organisations. There is no charge for appearing on the list.
INFO: The International Reporters Network
Email: int.reporter@oslo.online.no
Web: www.reporter.no

East and Southeast Asia: An Annotated Directory of Internet Resources

Online: <http://newton.uor.edu/Departments&Programs/AsianStudiesDept/>

Maintained by the Asian Studies program at the University of Redlands, this easy-to-navigate directory allows users to access annotated links by country and by political, historical, and cultural topics. The site specifies seventeen East and Southeast Asian countries and hundreds of specific subjects, including sections on academic and library research sites. The homepage also offers direct links to current "hot topics," such as the crackdown on Falun Gong, the Asian financial crisis, the famine in North Korea, and East Timor's "Road to Independence."

Virtual China

Online: www.virtualchina.com/forum/forum-1.html

By 2010 there will be more people on the internet in China than in the United States. How has, or will, the internet change China and its relations with the rest of the world? How might the Chinese change the internet itself? The new e-zine, "Virtual China" is running a forum on this topic and has received some extremely interesting replies.

Bytes for All

Online: <http://www.bytesforall.org>

"Welcome to South Asia. This talent-rich, resource-poor, tragic-powerhouse of immense software skills, finds its abilities recognised across the globe. And yet millions here can't find the solutions that could make life a little less of a struggle. Likewise, software brains from the region are serving some of the biggest companies in the globe... But it also finds itself ironically unable to afford the prices of 'legal' software that it very badly needs for itself. Bytes for All is an attempt to swim against the tide."

Through a website and an e-mail based mailing list, we hope to update interested readers about interesting ventures. Attempts that focus on people before profits. This initiative will regularly bring articles pertaining to IT practices in this region, news bits and information clips, discussion on contemporary topics, interesting developments on ICTs etc."

This venture is a joint undertaking by Frederick Noronha (featured in this issue of the ANAT Newsletter) a freelance journalist based in Goa, India interested in developmental issues, and by Partha Pratim Sarker a web designer and an online activist based in Dhaka, Bangladesh.

Global Grassroots Resistance Directory

Online: www.geocities.com/CapitolHill/Lobby/5217/ggrd.htm

This worldwide directory facilitates networking between and within grassroots movements resisting capitalism and oppressive power structures. The directory contains contact information of all known groups, associations, and organisations that: maintain and value grassroots based forms of organisation on principles of democratic decision making, decentralised forms of organisation and broad and public access to information. The directory also includes information of web sites and mailing lists that may be of use for networking with the sorts of groups mentioned above.

ShanghART

Online: www.shanghart.com

Within the momentum of the economic and social change of the last decade has come the re-emergence of China's creative talents. The unique and powerful works of a new generation of Chinese artists has begun to make its way into galleries and contemporary art museums throughout the world. Since its establishment one year ago, ShanghART has featured some of the most interesting young artists who live in China today. It has become an unique centre for contemporary art in a country with a fast developing art scene.

ShanghART displays works by internationally acclaimed Chinese artists, as well as new and coming young artists from Shanghai and all over China.

Para/site

Online: www.para-site.org.hk

Para/Site is a non-profit art space run by independent artists in Hong Kong and supported by the Hong Kong Arts Development Council. Founded in the beginning of 1996, it was temporarily located in Kennedy Town for a four-month project called "Artists-in-Western". In April 1997, they moved to their present location at Sheung Wan, the periphery of the city centre of Hong Kong, in a shop space of around 150msq. In addition to exhibitions, Para/Site aims at promoting contemporary art with other

CONTACT DETAILS



Street address

Lion Arts Centre
Cnr North Terrace &
Morphett Streets
Adelaide, South Australia

Postal address

PO Box 8029, Station Arcade
South Australia 5000
Australia

Phone: +61 (0)8 8231 9037

Fax: +61 (0)8 8211 7323

email: anat@anat.org.au

URL: www.anat.org.au

Staff

Director:

Amanda McDonald Crowley

Manager:

Amber Carvan

Web and Technical Officer:

Michael Shanahan

Information Officer:

Charity Bramwell



ANAT is a member of CAOS
www.caos.org.au

Board

Julianne Pierce

Adrienne Hender

Paul Brown

Jesse Reynolds

Vicki Sowry

Serafina Maiorano

Derek Kreckler

Brenda Croft

Amanda McDonald Crowley

MEMBERSHIPS AND GST

Due to the implementation of a Goods and Services Tax (GST) in Australia from 1 July, 2000, ANAT must charge a GST increment on membership for Australian based individuals and organisations on a monthly basis up until 1 July, 2000.

New membership amounts for Australian based individuals and organisations are listed below. Please note that non-Australian residents need not pay the GST increment.

April 2000

Ind. – \$25.00 (+\$1.88 GST) = \$26.88

Conc. – \$12.00 (+\$0.90 GST) = \$12.90

Org. – \$50.00 (+\$3.75 GST) = \$53.75

May 2000

Ind. – \$25.00 (+\$2.08 GST) = \$27.08

Conc. – \$12.00 (+\$1.00 GST) = \$13.00

Org. – \$50.00 (+\$4.17 GST) = \$54.17

June 2000

Ind. – \$25.00 (+\$2.29 GST) = \$27.29

Conc. – \$12.00 (+\$1.10 GST) = \$13.10

Org. – \$50.00 (+\$4.58 GST) = \$54.58

ANAT MEMBERSHIP FORM

ANAT is a membership based organisation. We encourage all those interested in art and technology to participate in the mapping of this eclectic territory by joining the organisation's continuing research into the field. ANAT depends on its constituents for input into the organisation's continuing evolution and seeks to ensure that the concerns of practitioners all over Australia are represented within the organisation's aims and objectives. Membership is priced to make it accessible to all artists and to enable broad representation from as many different social spheres as possible. Membership benefits include:

Benefits of Advocacy and Networking:

1. Inclusion on ANAT database, regularly utilised by researchers, journalists and curators
2. Links from the ANAT website to yours
3. Advice, advocacy and consultancy from ANAT staff
4. ANAT can broker access to technical resources (such as those offered by the CAOs and SCRO networks)

Benefits of Information Dissemination

4. Regular copies of the ANAT newsletter
5. Weekly / fortnightly copies of the ANAT members email digest which comprises updates of opportunities and events relevant to art and technology
6. Information and updates about ANAT's Conference and Workshops fund, National Summer Schools and all ANAT initiated schemes and projects

Access and Participation in ANAT Activities

7. Voting rights at AGMs
8. Eligibility to apply to ANAT's programs of support (some conditions may apply)
9. Knowledge that you are supporting innovation and dynamism within art and technology, through Australia's most progressive art and technology network

I would like to ☐ become a member of ANAT

☐ Renew my membership to ANAT

☐ Individual ☐ Concession ☐ Organisation

Please see the previous page for updated membership fees.

Name: _____

Organisation Name: _____

Position: _____

Address: _____

Postcode _____

Postal Address: _____

Postcode _____

Telephone (h): () (w): ()

Fax: ()

Email: _____ URL: _____

Would you be interested in having a link to your site from the ANAT web site?

☐ Yes ☐ No

Method of Payment: ☐ Cheque ☐ Credit Card ☐ Money Order

Credit card details: ☐ VISA ☐ Mastercard ☐ Bankcard

Card #:

Signature: _____ Date: _____

Expiry Date: _____

Cheques should be made payable to
the Australian Network for Art and Technology

For the ANAT Database

The ANAT database is a resource which holds information on individuals and organisations who are part of the international art, science and technology community. This resource is made available to interested parties, when ANAT perceive there to be a clear benefit to members. Please indicate whether we are free to release your details (if you do not respond to the question, we will presume that we can release your details):

☐ Yes, you may release my details

☐ No, use this data for statistical purposes only

For Individuals

Gender: ☐ M ☐ F ☐ Other

Are you an: ☐ Artist ☐ Writer ☐ Educator ☐ Curator ☐ Designer

☐ Programmer ☐ Project Manager ☐ Other: _____

What would you define as your major area of practice?

For Australians: (Optional)

Do you come from a non-English Speaking Background? ☐ Yes ☐ No

Are you an Aboriginal or Torres Strait Islander? ☐ Yes ☐ No

For Organisations

Core business of organisation: ☐ Arts ☐ Science ☐ Industry

☐ Government ☐ Other:

Core Activities: ☐ Exhibition ☐ Production ☐ Research

☐ Education ☐ Funding ☐ Publishing

☐ Other: _____

For Individuals AND Organisations Areas of Practice (or business):

- | | | |
|---|---|--|
| <input type="checkbox"/> Animation | <input type="checkbox"/> Multimedia | <input type="checkbox"/> Software Authoring |
| <input type="checkbox"/> Architecture | <input type="checkbox"/> Music Composition | <input type="checkbox"/> Sound Composition |
| <input type="checkbox"/> Computer Graphics | <input type="checkbox"/> Music Performance | <input type="checkbox"/> Sound Performance |
| <input type="checkbox"/> Crafts | <input type="checkbox"/> Neon | <input type="checkbox"/> Theatre |
| <input type="checkbox"/> Dance | <input type="checkbox"/> Painting | <input type="checkbox"/> Video |
| <input type="checkbox"/> Electronics | <input type="checkbox"/> Performance | <input type="checkbox"/> Virtual Communities |
| <input type="checkbox"/> Film | <input type="checkbox"/> Photography | <input type="checkbox"/> Virtual Reality |
| <input type="checkbox"/> Holography | <input type="checkbox"/> Printmaking | <input type="checkbox"/> Web Design |
| <input type="checkbox"/> Interactive Installation | <input type="checkbox"/> Robotics | <input type="checkbox"/> Writing |
| <input type="checkbox"/> Internet | <input type="checkbox"/> Screenbased Interactives | <input type="checkbox"/> 3D Modelling |
| <input type="checkbox"/> Laser | <input type="checkbox"/> Sculpture/Installation | <input type="checkbox"/> Other |



ANAT is supported by the Australia Council, the Federal Government's arts funding and advisory body

ANAT

surface
mail

ANAT Newsletter
registered by Australia Post
publication No. PP 535 80610028

if undeliverable please return to

ANAT
PO Box 8029 Station Arcade SA 5000 Australia