

ANAT NEWS

As members would be aware, ANAT is co-ordinating a Masterclass in January 2004 with British group Blast Theory. This is part of broader three-month *Thinkers in Residence* program, developed in partnership between ANAT, Adelaide Fringe 2004, SA Film Corporation and Dept of Education and Children's Services. The partnership will bring Blast Theory, along with members of the Mixed Reality Lab to Adelaide to develop the online and 'on-street' game *Uncle Roy All Around You* for presentation during the Adelaide Fringe 2004. The *Thinkers in Residence* program is an initiative of the SA government to bring innovative thinkers to Adelaide to contribute to strategic and long-term developments for SA. The focus of Blast Theory's visit is to investigate applications of wireless technologies, and to act as a catalyst to develop dialogue across cultural, state and industry bodies. It is also an important partnership, as it combines an interdisciplinary approach to experimenting with wireless technologies. With a focus on performance, film, sound, video, screen-based media and education, the Blast Theory *Thinkers in Residence* project aims to provide students and media practitioners with an opportunity to collaborate with a leading-edge multi-platform company.

ANAT is developing a focus on wireless technologies, and their applications in cultural contexts. The aim is to explore the potential of these technologies, and the sorts of commentaries and applications artists are devising in order to understand the

broader impact of wireless devices and networks. In addition to the Blast Theory project, ANAT is bringing the Manchester (UK) based duo the-phone-book.com to Australia for a series of workshops and talks. Launched in March 2002 by Ben Jones and Fee Plumley, the-phone-book.com enables ongoing research and distribution of innovative content opportunities across international convergent platforms. They will be presenting workshops at *electrofringe* (annual 5 day new media arts festival based in Newcastle) in early October, then travelling to other centres to discuss their projects and research into wireless networks.

To supply some background on current developments in wireless networks, this Newsletter includes an article by Canadian Lynn Sutherland. The article entitled *Portable Noise: The Present and Future of Wireless* is reprinted from the online magazine *HorizonZero*. Produced by the Banff Centre in Canada, *HorizonZero* was launched in August

I to r: Kent Finlayson, Olaf Meyer, Chris Joyner and Antoanetta Ivanova in the ANAT information booth at OzeCulture '03, Brisbane Powerhouse.



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2002 as a comprehensive web publication supporting critical writing and commentary on the digital arts. The site was introduced to Australian audiences by Sara Diamond, Artistic Director, Media and Visual Arts at the Banff Centre. Sara was a guest at the recent *Ozeculture* conference in Brisbane, and also spoke in Adelaide as a guest of the South Australian Film Corporation.

Since the inaugural *Ozeculture* conference of culture, new media and ebusiness in 2001, ANAT has had a presence through presentations and networking. At the 2003 *Ozeculture* conference, ANAT occupied a booth crewed by ANAT's Information Officer Charity Bramwell and Manager Alison Leach. ANAT saw this as a chance to meet existing and new members and create future opportunities, whilst at the same time attending the conference. As the only booth, ANAT stole the show! It was extremely successful with many delegates approaching and discussing potential opportunities and projects. Thanks also to all of those members who introduced themselves to the ANAT staff.

It is an important aspect of ANAT that staff members have the opportunity to attend events and meet with ANAT's national membership. This networking helps us to develop new links and partnerships and especially to see the work of emerging and established new media artists. As part of ANAT's commitment to staff development and networking, I have been working with the Museum of Contemporary Art as the Curator of Primavera 2003, the MCA's annual exhibition of Australian artists 35 and under. This year the focus is on new media arts and includes work from Daniel Crooks (Vic), Alex Davies (NSW), Adam Donovan (Qld), Shaun Gladwell

(NSW), Anthony Hunt & Stephen Honneger (Vic), Jonathan Jones (NSW), the Kingpins (NSW) and Mari Velonaki (NSW). In addition an outdoor component will feature Melbourne based Cicada (Nick Ritar and Kirsten Bradley) together with sound artist Ben Frost, creating a sound and video projection work on the Plaza undercroft at Australia Square. This project has been supported by the *Art and About* program of the City of Sydney with free performances on October 9 & 16 from 8 - 9.15pm. The Primavera 2003 exhibition runs from Sept 17 - November 30.

During August, ANAT hosted our first 'artists in residence', with Perth based new media artists PVI Collective spending one week in the ANAT project space. PVI were in Adelaide as part of an Australia Council supported research trip to gather materials for their latest tactical media performance 'tts' [*terror[ist] training school*], originally created in Perth 2002 as part of the *Artrage* festival. PVI spent time in Adelaide with fellow collaborator Jason Sweeney, who will be developing the sound for 'tts'.

PVI Collective say of the work: *The 'tts' project is a provocative, nocturnal sightseeing tour, that takes place on a 22-seater media-customised bus. It navigates its way through an urban landscape, with tour guide in-tow, stopping off at public spaces and national icons, revealing a series of interventionist acts that unfold and blur with everyday activities. Through a mix of live, on-site and on-board performance, video and sound, the tour exposes and subverts comfort zones of daily life, to reveal an unspoken fear of safety in a contemporary metropolis. 'tts' looks at fear as a successful mechanism for social control.*

PVI Collective are currently looking for 'recruits' to be involved in the project, which will be staged in the second half of 2004. Further details can be found at their website <http://www.pvicollective.com>.

Finally, it is with regret that I am announcing the departure of Claudia Raddatz from ANAT. Claudia joined us in October 2000 as ANAT's Web and Technical Officer, she is leaving the organisation to pursue her creative interests and artistic pursuits. Claudia has made an invaluable contribution to ANAT including co-ordinating the new ANAT website; developing and managing the CAO's website; technical support at the TAZ workshop, TILT forum, Sydney Oct 2001; managing ANAT's listservs; building the website for the ASCI (Art Science Collaborations Inc) 2002 symposium; working with Jason Hampton on the *Aboriginal Ancestors* website (including translation into Spanish); tutoring at the National Indigenous School in New Media Arts 2002; co-ordinating the *Synapse* database and assisting with the launch in May 2003; co-ordinating technical set-ups for ANAT talks, events and meetings and overseeing all of ANAT's internal technical requirements. Claudia has spent many hours on setting up the network and infrastructure at the new offices and she has also assisted many artists and ANAT members with technical and other requirements. She brought a great passion for art and technology to ANAT, and also made many links with communities and artists from her native Chile. The Board and staff of ANAT wish Claudia all the best with future projects and thank her for her commitment and dedication to ANAT over the last three years.

Julianne Pierce
Executive Director

PROJECT UPDATE

TIME_PLACE_SPACE 2

21 Sept – 5 Oct, 2003
Charles Sturt University, Wagga Wagga

Time_Place_Space is a long-term professional development strategy for emerging and established practitioners to explore new methodologies, processes and contexts for hybrid performance practices.

The T_P_S 2 artists come from a range of art form backgrounds and geographies including performance, directing, dance, circus, cabaret, visual arts, installation, interactive and screen based art, new media, writing, music, experimental sound design and more.

The participants in T_P_S 2 are: Michelle Blakeney, Shannon Bott, Sue Broadway, Boo Chapple, Rosie Dennis, Simon Ellis, Ryk Goddard, Jaye Hayes, Cat Hope, Nancy Mauro-Flude, Wendy McPhee, Mike Nanning, Caitlin Newton-Broad, Michelle Outram, Deborah Pollard, Hellen Skye, Sete Tele, Douglas Watkin, David Williams, Fei Wong, Yiorgos Zafiro.

The facilitators of the workshop are: Marijke Hoogenboom (Netherlands), Margie Medlin (Australia), Michelle Teran (Canada), Richard Layzell (UK) and Jude Walton (Australia).

Time_Place_Space is an initiative of the New Media Arts Board of the Australia Council and is supported by the New Media Arts, Dance, Theatre, Music and Visual Arts boards. Time_Place_Space is produced by Performance Space, and curated by Sarah Miller (Director of Perth

Institute for Contemporary Art), Julianne Pierce (Director of the Australian Network for Art and Technology, Adelaide), and Fiona Winning (Director of Performance Space, Sydney).

BLAST THEORY MASTERCLASS

CALL FOR APPLICATIONS

new media artists + filmmakers + screen-based artists + performers + visual artists + sound artists + web artists

ANAT is now calling for applications from Australian practitioners to participate in a Masterclass with renowned British performance company BLAST THEORY and members of the Mixed Reality Lab (University of Nottingham). The Masterclass will focus on the creative application of wireless technologies and will be part of the development of *Uncle Roy All Around You*, to be presented during the 2004 Adelaide Fringe.

Premiered online and at the Institute of Contemporary Arts in London in June 2003, *Uncle Roy All Around You* will be adapted for the avenues and lane-ways of the University of Adelaide.

The game consists of Street Players who search for Uncle Roy using hand held devices. Online Players cruise through a virtual model of the same area, searching for the Street Players and looking for leads that will help them find Uncle Roy. Using web cams, audio and text messages players must work together. They have 60 minutes and the clock is ticking...

An aim of the Masterclass is to support and promote ongoing collaboration between SA based, national and

international practitioners. Following the Masterclass, several attachment positions are available for SA practitioners to work with Blast Theory and MRL on the development and presentation of *Uncle Roy All Around You*.

DATES: Tuesday January 13 - Thursday January 15, 2004

VENUE: Technology School of the Future (TsoF)

COST: \$250/\$225 ANAT Members (Fee waivers can be applied for)

DEADLINE: Application deadline FRIDAY 26 SEPTEMBER, 2003

GUIDELINES: Contact ANAT for application guidelines or go to www.anat.org.au/BlastTheory.pdf

BUZZWORD *noise, October 2003*

ANAT is pleased to announce a new partnership with noise, a national festival happening in October 2003 that will showcase and celebrate the creativity of young Australians.

The festival's purpose is simple: to profile young artists and their creative work. noise is not a typical arts festival – it has no actual location. Instead, noise uses the media as its canvas to exhibit young peoples' work – in print, on radio, on television and on the net. This unique approach helped the last noise festival in 2001 to reach an audience of millions.

As part of noise 2003, ANAT will launch *Buzzword*, a new web publication that supports national collaborative processes between young writers and new media artists.

ANAT has an ongoing commitment to supporting emerging practitioners, and *Buzzword* will support the development of new work as well as providing an

outlet for promotion and access to the works. ANAT's Information Officer Charity Bramwell is co-ordinating *Buzzword*, with advisory support from geniwaite (former ANAT Board member and Writer/Lecturer in Computer Mediated Art, Victoria University).

The first stage to be launched in October will feature 2 collaborative projects and from this *Buzzword* will develop into an ongoing site for new collaborations between emerging writers and artists.

The overall aims of *Buzzword* are to:

- * develop online writing as well as web publishing skills
- * exhibit new work online
- * experiment and innovate in the area of 'e-literature' and new media art
- * develop collaborative projects between emerging writers and new media artists
- * network with other artists with interest in this area
- * develop broader opportunities for ongoing publishing and exhibition

THE-PHONE-BOOK.COM *electrofringe* and tour, October 2003

<http://www.the-phone-book.com> is a digital publishing project that commissions international new works of ultra-short fiction for quarterly distribution by wireless and traditional internet.

the-phone-book.com was conceived by creative director Ben Jones and producer Fee Plumley, and is edited by publisher Ben Stebbing of Clinamen Press, all based in Manchester, UK. They also create, commission & run workshops on content development for convergent platforms.

ANAT is bringing the-phone-book.com to Australia in early October 2003. They will present workshops at *electrofringe* on ultra short fiction and animation and will speak on a panel about the 'frisson between technology and text' - how technology defines and effects text creation.

www.electrofringe.org/2003/
www.the-phone-book.com
www.the-sketch-book.com
www.artones.net

SYNAPSE DATABASE <http://www.synapse.net.au>

The *Synapse* database is an online resource promoting the nexus of art and science. *Synapse* encourages creative and experimental collaborations between artists and scientists. It has been developed by ANAT as a major component of the Australia Council's New Media Arts Board *Synapse Art and Science Initiative*. The database can be searched by artist, project or science organisation. It contains information on exhibitions, collaborative projects and areas of science interest and includes a showcase of artworks in the online gallery.

The database has been established through the hard work of Claudia Raddatz and Andrew Hillam and will continue to grow as an essential site for information about science and art projects. Artists are invited to submit their work to *Synapse* and to utilise it as a resource about Australian art and science collaborations.

SYNAPSE ARC LINKAGE GRANTS

As part of their *Synapse Art and Science Initiative*, the Australia Council is providing support as an Industry Partner for arts/science research collaborations

funded by the Australian Research Council's (ARC) Linkage program. Following a call for proposals and an application process to the ARC in late 2002, two successful partnerships were announced at a function at Parliament House in June 2003, these are:

FISH-BIRD: AUTONOMOUS INTERACTION IN A CONTEMPORARY ARTS SETTING - University of Sydney

Investigators: Dr David Rye, Steve Scheduling, Stefan Williams (Australian Centre for Field Robotics)

Artist: Mari Velonaki - artist working in the field of interactive installation.

AUDIO NOMAD - University of NSW
Investigators: Dr Daniel Woo (Human Computer Interface Lab, School of Computer Science), Professor Chris Rizos (Satellite Navigation and Positioning Laboratory, School of Surveying & Spatial Information Systems and Engineering).

Artist: Dr Nigel Helyer - Sonic Objects; Sonic Architecture

ANAT is pleased to announce that it is an industry partner (along with Australia Council, Museum of Contemporary Art and Artspace) on the ACFR and Mari Velonaki project *Fish-Bird: Autonomous Interaction in a Contemporary Arts Setting*.

Over the next three years, ANAT will provide consultancy and support to the project, which will include feedback and commentary in the ANAT Newsletter. This is an important partnership for ANAT as it creates new industry links as well as supporting an innovative residency program between a new media artist and a key research centre.

PUBLICATIONS AVAILABLE FROM ANAT

PREFIGURING CYBERCULTURE: AN INTELLECTUAL HISTORY

ANAT member's offer
\$49.45 (10% discount on the RRP of \$54.95), including postage and handling within Australia. Please contact the ANAT office to order your copy.

Published by Power Publications and MIT Press, *Prefiguring Cyberculture: An Intellectual History* is an ambitious new book that looks to literature, science and philosophy for antecedents of the informatic culture of the late 20th and 21st centuries. Within three thematic fields - artificial life, virtuality and futurology - leading philosophers, media theorists, critics and historians of science were asked to examine seminal texts that anticipate key aspects of cybercultural theory and practice, from Descartes on the mind/body split, Plato on the cave, Turing on thinking machines, Shelley's *Frankenstein*, the Renaissance arts of memory and Philip K. Dick on androids, to William Gibson on cyberspace and Arthur C. Clarke on the technological future.

Edited by Alessio Cavallaro, Ann Marie Jonson and Darren Tofts.

BORDERPANIC

Available from ANAT for \$10.

BORDERPANIC was a project in September 2002, held in Sydney, that brought together artists, media makers and thinkers who are questioning the world's geopolitical and metaphorical borders. The project was initiated by Performance Space and developed by Zina Kaye and Deborah Kelly. It included a major exhibition, video screening and

presentation by Mike Parr all at Performance Space, a tactical media lab and symposium hosted by the Museum of Contemporary Art, a forum at Metro Screen and a postcard competition held in conjunction with Avant Cards.

As a part of BORDERPANIC, Performance Space and ANAT collaborated on a reader, edited by Cassi Plate, serving to contextualise the events and further extend engagement with urgent issues of migration, border control and social structures in the 21st century. It features works and texts by artists and speakers involved in the project including Julian Burnside QC, Linda Jaivin and Gordon Hookey. The production of this reader was supported by ANAT as part of an ongoing commitment to supporting critical engagement and debate.

SCIENTIFIC SERENDIPITY and ARCADIA

Free publications produced by ANAT in 2001 and 2002 resulting from projects on theology and art and science. Please contact the ANAT office for a copy (\$5 postage and handling).

INDUSTRY UPDATE

AUSTRALIA COUNCIL NEW MEDIA ARTS BOARD REAPPOINTMENT

On July 31st, Federal Minister for the Arts and Sport, Senator Rod Kemp, announced the reappointment of Peter Hennessey to the Australia Council's New Media Arts Board.

'I am extremely pleased that Mr Hennessey has agreed to remain a member of the New Media Arts Board. A visual and screen based artist with extensive technical expertise has made him a valuable member of the New Media Arts Board,' Senator Kemp said.

Peter Hennessey co-founded Drome with Patricia Piccinini in 1995 where he has been involved in a variety of CD and on-line projects including experimental work for arts organisations and commercial clients such as Cinemedia, Chunky Move and the Next Wave Festival.

In 1996 Mr Hennessey won a scholarship to attend the Siggraph Conference in the USA and in 1998 a computer-animated piece of his was chosen to be part of the Siggraph Computer Animation Festival. Peter Hennessey has had his work displayed in the Netherlands, Japan, the United States and New Zealand as well as solo exhibitions ICU and PathL at the Basement Project, and several group exhibitions in Melbourne.

'Mr Hennessey's enthusiasm for new media work is of great value to the members of the New Media Arts Board. I look forward the contributions he will continue to make to the Board and to the Australia Council overall,' Senator Kemp said.

Peter Hennessey's new term on the Australia Council's New Media Arts Board expires on 30 June 2005.

The New Media Arts Board supports collaborative arts practices that do not fall within conventional, single artform areas. The Board supports work in two broad areas of practice-Interdisciplinary art and new media art.

Continuing members on the New Media Arts Board are Michael Snelling (Qld) Chair, Marcus Canning (WA), Jenny Fraser (Qld) and Alicia Talbot (NSW). Linda Cooper from SA and Nigel Helyer from NSW have recently completed their terms on the New Media Arts Board.

FEATURE ARTICLE

www.horizonzero.ca

The following article *Portable Noise: The Present and Future of Wireless* first appeared in the November 2002 edition of *HorizonZero*. A collaboration between the Banff Centre (Canada) and The Department of Canadian Heritage, *HorizonZero* is a monthly web publication dedicated to the vibrant Canadian digital arts and culture scene. *HorizonZero* presents the best in digital art, writing, interactive media, participatory Web spaces, and live online events and is a successful model for online publishing and overview of digital arts practice.

ANAT has established ongoing links with the Banff Centre and in particular with the Artistic Director, Media and Visual Arts, Sara Diamond, who was a tutor at the 2000 Alchemy Masterclass. In its continuing association with the Banff Centre, ANAT is pleased to introduce *HorizonZero* and encourages ANAT members to visit the site and its changing monthly editions.

This article by Lynn Sutherland, serves as a useful introduction to wireless technology, including explanations of terminology, devices and networks. ANAT would like to thank *HorizonZero* for permission to reprint this article.

PORTABLE NOISE: THE PRESENT AND FUTURE OF WIRELESS by Lynn Sutherland

There has been a lot of noise about wireless communications recently — both literally and figuratively. We hear statements like “billions of cell phones in use,” “completely connected,” “anytime, anywhere, anyplace,” and “ubiquitous embedded wireless devices”

from every direction. But what does all this talk actually mean? What is here at our disposal right now? And what might realistically be coming our way over the next few years?

I'm going to respond to these questions first with a bit of a primer — let's call it “Wireless 101” — in order to demystify the jargon and lend some context to all this talk about mobile networks. Then I'll mention the three biggest trends, and a few of the major challenges, that I see influencing the near future of wireless technology.

In its broadest sense, the wireless world could be said to encompass the entire electromagnetic spectrum. But the wireless world that most of us know and use today is the cellular telephone network, riding on the invisible radio waves that vibrate between 800MHz and 3GHz. The matter of signal speed (measured in Hertz) is mostly irrelevant to this conversation, except that certain speeds are licensed (at a large cost to the communication companies, and therefore the user) and dedicated to certain purposes, while other speeds are unlicensed and available for free public use (and misuse).

The four main types of wireless systems are: the “local area network” (LAN), the “personal area network” (PAN), the satellite network, and the cellular network.

Local

With a range extending between tens of metres and a few kilometres, the LAN is designed to cover a home or an office. These systems typically connect one or more computers wirelessly to a base station (via a Network Interface Card or NIC) which then connects the computers to the Internet. Wireless LANs are beginning to appear more

frequently in businesses and residences: Apple makes a base station called the “Airport”, and other vendors are now offering them as well. A base station costs about \$300 (Can), while a NIC costs about \$100. LAN signals are carried on a free (i.e. unlicensed) part of the electromagnetic spectrum.

Personal

A PAN, or personal area network, is designed to cover a person or a room. PANs have a range of about ten metres and, like LANs, are carried on an unlicensed part of the spectrum. These systems are usually about the size of a microchip, and are embedded in small devices like cell phones and personal digital assistants (PDA). The advantage of this technology is its low power requirement — these systems can run on small batteries. The main standard emerging here is called Bluetooth (after a tenth-century Danish king). Several trial applications are currently being tested. Examples include: transferring data between computers and PDAs; enabling mobile phones to make vending machine purchases; and wireless headsets for telephones.

Satellite

Satellite networks can cover a very large range — hundreds of kilometres. With a higher “data rate” (measured in bits per second) than LAN or PAN systems, they can also transmit a lot more information in a given amount of time — enough to carry even television signals. But the travel time of the signal from the satellite to the receiver antenna can be 10 to 250 milliseconds — far too long to enable many applications, like regular two-way voice communication, or the remote control of vehicles or equipment. And, even though the antennas have become much smaller in recent years, they are still too big and expensive to use with most portable applications.

Cellular

Cellular networks operate via the familiar cellular tower. These stations transmit signals in the sub-microwave range (radio waves, or RF) with a range of between one and one hundred kilometres, depending upon the amount of interference from built structures, hills and valleys, and other wireless signals. There have been several steps in the evolution of the cellular network, and several more are predicted for the near future, giving rise to the shorthand terms 1G, 2G, 2.5G, 3G, and 4G. But what do these buzzwords mean? The “G” means generation: So 1G, or “first generation”, were the original analog cell phones. 2G and up are the newer digital cells. The main functional difference between generations is the data rate — again, the information transmitted in a given period of time.

We presently live in a 2.5G world (and we will for a while). 2.5G is a bit slower than a slow home dial-up connection. 3G will be ten times faster than 2.5G, but not as fast as a typical cable or DSL connection. Although 3G was first envisioned around 1985, and many thought this generation would be operational by the year 2000, this has not come to pass. The main reason for this has been the cost to wireless network suppliers of putting the necessary equipment in place, licensing the RF spectrum (which was auctioned off to the highest bidders around the year 2000), and resolving the issue of which standard to use (not to mention the current lack of applications, and thus customers willing to pay for the service).

The Future

Now that the jargon has been explained, and the present state of wireless roughly defined, what about the aforementioned predictions about upcoming trends in mobile

communication? What new technologies are we likely to see emerging into the mainstream over the next few years? And what might some of the implications be, in terms of how we live, communicate, and manage information?

First prediction: LANs (802.11 LANs, to be precise about the standard) will spring up everywhere, but they will require a new way of looking at the security of personal and corporate information.

Second prediction: Every Game-Boy generation kid will have a Bluetooth PDA, and they will figure out applications that we can't even imagine.

Third prediction: Applications of wireless location, tracking and monitoring of vehicles, people, inventories, and so on will spring up in cases where there is a business case for improved service or productivity, or where there is a safety issue for items or persons.

In the short-term, Bluetooth and 802.11 will enable stand-alone wireless applications, such as interactive gaming between PDAs, and wireless Web access from your favourite pub, backyard, office building or campus. Bluetooth and 802.11, because they are inexpensive and don't require massive infrastructure, will likely grow in use rapidly. 3G, 4G and satellite networks require massive infrastructure investment, however, and it will take longer to cost-justify their wide deployment.

One of the biggest challenges will be getting the various technologies — satellite, cellular, LAN and PAN — to work with each other. These require different hardware and speak different “data languages”, so their integration

will require a lot of work. Another issue that needs to be better understood is what impact these ubiquitous invisible signals will have on other forms of equipment, and especially on human beings and other life.

Privacy vs. Convenience

I'll end with a scenario that demonstrates some of the potential power, and potential problems, inherent in this wireless technology wave.



Screen grab courtesy Horizon Zero.

Imagine a person with diabetes. In the not-too-distant future, this person might have an implanted micro insulin pump with a wireless Bluetooth connection that sends data to the person's pocket PDA. The PDA could be programmed to track the person's blood sugar levels over time, compute appropriate dosages, and send orders to the implanted micro pump to release insulin when needed. At home or at the doctor's office, the PDA might be enabled to send a few weeks worth of recorded information to the doctor's computer via an 802.11 wireless connection. In emergencies, the PDA could broadcast basic medical and location information through a local

cellular network, or through a satellite network if the person is off the beaten track.

This scenario predicts seamless autonomous support for the diabetic person, and the smooth transfer of important information to others in an office or emergency situation. But what about the security of the information? Encryption, passwords, and other privacy and security systems would slow down or even disallow some of this seamless transfer of data. What trade-offs will people be willing to make when considering the privacy of their information versus the convenience achievable through wireless communications?



Screen grab courtesy Horizon Zero.

The author used PriceWaterhouse Coopers' Technology Forecast 2001-2003 to verify the technical details for this article.

Lynn Sutherland is the Director of Programs for iCORE —the Alberta Informatics Circle of Research Excellence, where she funds and develops research in software engineering, wireless networks, high performance systems, and nanotechnology.

MEMBER'S FORUM

The ANAT MEMBERS FORUM is a space for ANAT members to publish and contribute to the Newsletter. Contributions can be in the form of reviews, commentaries or background to your work and practice. We welcome both text and images and contributions are published un-edited. Please contact Charity at ANAT if you wish to submit a piece for the MEMBERS FORUM.

technoMetamorphosis and Art Practice by Rob Harle © 2003

The technoMetamorphosis of humanity is gradually increasing momentum. Almost daily, scientific breakthroughs in what I term, the 'body' high technologies are announced. Machines are becoming more and more integrated into our lives, some argue irrevocably and the Internet expands exponentially. Hold on tight kiddies, we're into the journey, from traditional biological, tool-using-beings, to part-cyborgs to cyborgs to transhumans..... to posthumans. We may be accompanied on the journey with some new species, yet to be realised, some yet to be imagined. Now seedAI researchers (a seedAI is an artificial intelligence entity capable of boot strapping itself) are using a more holistic developmental approach, these proposed conscious entities may not be too far from being realised..... see the COG team's approach to AI and its creations at MIT.

The immediate future of humans, holocausts aside, will be a marriage of conventional human with various technological enhancements..... human + machine = cyborg. The term cyborg refers to an entity that is a combination of conventional biological (organic) and inorganic attributes. Whilst the concept

of, and the term cyborg itself, has been used in popular films and fiction works it has also spawned legitimate academic discourse. The addition of inorganic attributes may be divided into 'add-ons' and 'implants', add-ons could be anything from false teeth to an artificial (removable) leg, implants are such devices as Pacemakers and neural electronic brain 'chips', to alleviate such illnesses as Parkinson's Disease. Consequently there are many cyborgs currently existing in the world, the difference between a human with a Pacemaker, and a fully bionic entity with 'silicone-chip-enhanced' brain, is perhaps only one of degree.

These technologies together with stem cell implantation, germ cell engineering, asexual cloning, development of more sophisticated virtual reality environments and nano-engineering are all unique concepts and practices that are bringing about our technoMetamorphosis.

One techno-concept that I have not mentioned is the Extropian ideal of 'Uploading'. That is, copying the entire content of a human brain to a more suitable non-DNA based super-computational matrix, which will allow extreme longevity (Immortality), massive learning and intelligence capabilities. My research has shown this Uploading concept to be fundamentally flawed in principle and is no more than science phantasy, however, copying a whole person (not just the brain) to a simulated virtual environment may be a different matter.

Whilst the art of futurists has influenced some of the technologies mentioned, for those artists not specifically orientated towards creating possible futures, the interaction of art and technology is more; mirroring the current technologies, or questioning

their validity from ethical, moral and social perspectives.

This is the exciting part for artists because the interaction, symbiotic or otherwise, opens almost unlimited possibilities for art practice. Some artists, such as those documented in ANAT's Scientific *Serendipity*, delve deep into the actual technology itself, physics for example, producing truly hybrid works and works which could not exist without such scientific input..... thus truly blurring the received distinction between art and science. Others use technological artefacts to create new original art works. Still others use machines to produce either conventional or futuristic style art. My own work uses a computer as both tool..... for creating digital images, and as machine..... for co-creating many of my poems and experimental short stories. I'm not referring to using a computer as a word processor..... basically a tool concept..... although of course I do that as well, but of using various programs to actually write poems and stories.

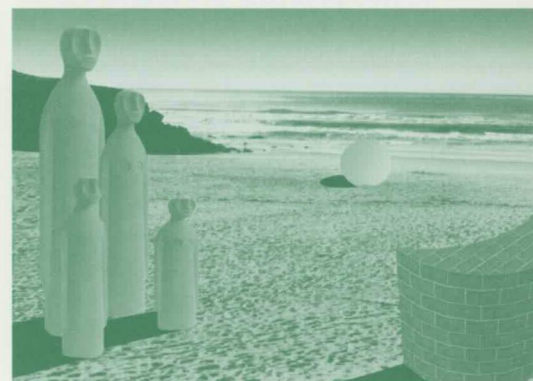
My own art is concerned with exploring the actual technoMetamorphosis itself. At present we have one biological foot still firmly planted in the primeval swamp and the other testing the water of the thrilling, dangerous and enticing transhuman future. By juxtaposing the conventional with the new, for example an ordinary beach scene with strange futuristic entities inhabiting it, I attempt to engage the viewer's imagination so as to question the type of future they want to live in, or better, help create.

It may be of interest to explain how I came to use technology as an indispensable part of my art practice. The first reason was my physical health increasingly prevented me from continuing with the very low-tech

sculptural process of stone and woodcarving, in which I was engaged for some fifteen to twenty years. Frustrated with this limitation I returned to study, much of this involved Philosophy of Mind, religious/spiritual notions of a "self" and Artificial Intelligence. The culmination of these investigations was a thesis that explored and challenged Freud's notion of the Unconscious. I did this using findings from neurophysiological research and a consequent analysis of the 'latent' sexual content of Surrealist poetry using a computer program I created to actually write poetry. I now use this program to co-author much of my current poetry. A second (forthcoming) book of poetry, *Mechanisms of Desire*, will explore the relationship between people and technology, (computers, the Net, mobile phones) and also the ubiquitous, Supermarket. The program consists of various 'parts-of-speech' dictionaries and most importantly a structure file. This file may be modified endlessly and determines the actual syntactical structure of the generated poem, it calls randomly from the various dictionaries to write a poem of any desired length and stanza arrangement the co-creator chooses. An example of one such poem, *False Narratives* is printed below.

During my extensive research into the possibility of creating an intelligent (conscious of self) machine entity (as opposed to a seemingly intelligent industrial robot) I uncovered many unsubstantiated (actually absurd) claims regarding future technologies and the human self. The previously mentioned Extropian 'Uploading' concept being one of them. Kurzweil's book, *The Age of Spiritual Machines* is an in depth look at many of the possible future scenarios, with a good history of our engagement and integration with machines and technology. However, the

book should be read critically as there are some serious unfounded assumptions regarding the replacement of our corporeal bodies with more suitable super-computational matrices. A selection of my critical papers, which explore these concepts, may be downloaded from my web site (see below), see especially, *Cyborgs: Uploading and Immortality. Some serious Concerns*.



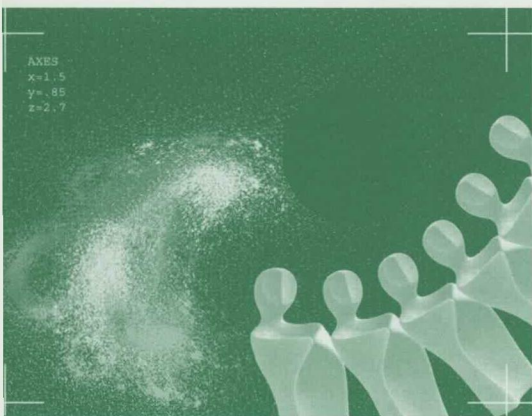
'Family Beach Outing - 2048'.
By Rob Harle.

Despite the more bizarre claims of various futurists, one thing emerged from my research, our engagement with technology will only increase and will be a further move toward evolutionary complexity, perhaps(?) the next stage in human evolution. This does not imply, however, that the punctuated stages of evolution are in any way predetermined.

I call this process the 'technoMetamorphosis' of humanity. My visual artwork attempts to evoke the 'Surreality' of this technology (rather than biological) driven evolution. I use various computer programs to create these images including an artificial landscape creator, fractal and chaos generators and Photoshop. I rely heavily on the ability to scan slides,

photographs and other images to incorporate into the new images. The finished works exist as fairly large, complex digital files, some of which I print using archival quality materials, others I upload to the Net. Many of the figures(?) used in my digital images are actual sculptures I created some time ago, some of which were inspired by Huxley's, *Brave New World*.

My final images to do not attempt to make value judgements about the



'Nanoscan of a Thought Emerging from the Visual Cortex'. By Rob Harle.

technoMetamorphosis but rather engage the viewer and confront them with the possible future scenarios that they have a role in deciding.

Many of the current technologies are changing, or will soon change us, fundamentally and irrevocably. More than ever before individuals should make some effort to be informed about decisions of the future, however, I fear the old adage, 'A few make things happen, quite a few watch what happens and the majority wonder what happened', is as true as ever. Artists engaged at the interface of science, art and technology may help overcome the

apathy and are in the envious position of being able to do so.

One of the areas of science/technology that is ripe for interaction with art is the fledgling science of 'nano'..... medicine, engineering, materials. If the full potential of nanotechnology is realised it will transform humanity in almost unimaginable ways; possible artist-in-residence projects may be able to be arranged with the science departments within some universities in Australia. The University of Queensland and a few other universities now have undergraduate science degrees in nanotechnology. This could be a good place to investigate for possible liaisons between artist and scientist/researchers/professors. Also I understand the Federal Government is enthusiastically providing funding for nanotechnology. The state of Queensland wants to become the world leader in this technology and are providing funding accordingly.

For those interested in the technoMetamorphosis and not sure where to find more information the following keywords will yield a world of fascinating, to say the least, sources and links. The Singularity, Extropian, Transhuman, Cyborgs, post-biological culture, transgenics, technoetics, immersive VR, A life, Artificial Intelligence, COG project, and of course, nanotechnology. See you on the other side of the 'Singularity'.

Rob's own work may be seen on his web site: www.lis.net.au/~recluse/harle

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False Narratives poem by Rob Harle

Running the road towards deep
midnight
speeding, grinding down
society is fucking machines hard,
consuming seductively false narratives;
the new way of the pure cyborg
(a contradiction)
transhuman, post-human becoming.
A human to be rejoined with, The Other
(plastic, metal, silicone).
The mythology of the brain-horizon
crashes yet survives,
crashes and survives again,

and powers-down unified systems.
A sleeping binary matrix calculates
seven main points of original sin,
within a human existence
by the same self
explained by moral judgements
drawn from a false God
bruised-blue false narratives,
DECEIVE AGAIN!
Tortured minds calculate,
ways, means, possibilities,
mathematically
to, [DELETE] our bodies.
The reality, insidious attachments
of the new social control,
the horizon within society
looms menacingly,
mirage like,
and just as deadly.
That which she brings with the body
humming, clunking, never urinating,
a reinterpreted sense
to fully migrate,
DARE, YOU?
Who represent the dissenters,
the mutes within the dominant order?
one created from the great false text
(absurd discourse),
science at the debate of the interpreters
insists, forcefully
evolution was - the time of the body;
no more.
Hideous manifestations emerge
oozing from milky white laboratories,
a new concept for contemplation,
(without a hideous God),
Immortality
flies in the cold steel fractured face of
humanity.

Rob Harle © 2003

Rob lives and works in Northern NSW, Australia. His current academic work involves research into transhumanism and the nature and possibility of true non-biological (machine) consciousness. His conventional sculpture work has given way to creations of digital images evoking a sense of our impending technoMetamorphosis.

CONFERENCE AND WORKSHOP REPORTS

World Wide Video Festival (WWVF) 8th - 25th May 2003 Amsterdam, Netherlands by Annemarie Kohn

To avoid jetlag, my online time zone calculator and jetlag avoidance instructions suggested that I seek light between the hours of 2-6am, and stay in the dark for the rest of the day. It is fortunate then that I was attending a 3 week long video festival, where I could seek the light I needed.

For the 3 weeks of the WWVF there was a smorgasbord of video installations, artists talks and public screenings celebrating the moving image.

Venues included Vondel Park, Montevideo, deBalie, de Appel, the Melkweg, the Nederlands Instituut voor Mediakunst and the new Amsterdam Passenger Terminal, a building of stunning contemporary architecture made of transparent green materials.

The all glass, top deck lounge of the Passenger Terminal was full of double sized beanbags surrounding remotely controlled terminals that encouraged many hours of reclining, with a view of either Amsterdam Central or video art from around the world. It was the perfect space in which to take a breather from the cultural experiences of the infamous city, and peruse the offerings of the World Wide Video Festival.

This year's festival celebrated its 20th anniversary with a retrospective that highlighted developments in video art over the past two decades. The overview also consisted of installations that were developed at the time when WWVF first started in the early 1980's.

Highlights...

This years festival included a focus on Latin American video art, with an amazing collection of the work of Eder Santos (Brazil). The festivals guest of honour and artist in residence, Santos created six new installations collectively titled *The Encyclopedia of Ignorance*.

The works explored the experiences of 'mortal' sins - vanity, jealousy, vice, remorse, and laziness, and the intense emotions they evoke.

Upon entering a dark room through heavy black curtains, I was intrigued by the quality and visual presence of the installations (all six in one very BLACK space) and their references to memory and emotion.

Weeks later as I write this report from my bed, I can distinctly smell old books, old wallpaper and cigar smoke as I visualise the installations, and yet I believe the space held no smell at all. Projections on horizontal marble slabs; through coloured drinking glasses in a glass cabinet with a mirrored backing; into a sink of water; in all directions, the viewer was kept lingering through the spaces for the longest amounts of time.

The opportunity to view a retrospective of the work of performance artist Marina Abramovic was the highlight of the festival for me. The presence of performance artists using the medium of video in this festival was small but significant and important.

For Abramovic, a performance is an immediate exchange of energy between her and her audience. Since the beginning of her career in Belgrade in the 1970's, Marina Abramovic has been occupied with performance as a visual art form. Her own body is both the subject and the medium.



Projections on the ANAT Building as part of the SALA Festival Moving Image Program.
Artists: Amanda Adam, Adam Fendom (Dfaces of Youth Arts, Whyalla).

In order to investigate her own physical and mental boundaries, she undergoes extreme pain, exhaustion, danger, and emotional and spiritual transformations.

Originally using video as a way to document her performances, it has now become a primary tool for her creative work. It was her video works that were shown as part of the WWVF.

In *Portrait Gallery* (1975-2002) sixteen monitors show sixteen performances where Abramovic uses her own head as a starting point. Within these monitors, lined up along the corridor of the gallery space of Montevideo, the installation offered multiple views of a changing Abramovic as artist and creator over 25 years.

Her newest work, *At the Waterfall* (2003), showed the heads of 106 chanting Buddhist monks and nuns on a large wall. Viewers could take a seat on reclining chairs in the room, the images and sound surrounding the visitor like a waterfall. This work endeavours to convey energy purely by means of image and sound.

The WWVF also included an exploration of Arab media culture, with the exhibitions *Mapping Sitting* and the *Atlas Group Project* by Walid Ra'ad and visual artist Akram Zaatar. 'Photo Surprise', a photographic practice common in the Middle East between 1940-1960, was documented and presented well with a fast cut DVD showing the works of these 'surpriseurs'. The technique consisted of photographing pedestrians as they walked in urban centres. One of the first to introduce this practice to Tripoli was Agop Kuyumjian, in 1921. His work, photographed in the Sahat el Tel (Tell Square) was a joy to view.

Other notable works included *Chimera* by Minnette Vari (South Africa); I weaved my way through semi transparent screens, joining into a procession of human and animal mutations, like a dream. Certainly, by this stage of the festival I did feel that my eyes were as large as a bug's, and my insatiable diet of brown bar fodie had changed the shape of abdomen forever, so I felt quite at home in this installation. In Jian Wei Wangs *Ying Bi: Ping Feng/Screen:Screen*

(China), rich colours and subject matter frame by frame expressed the different worlds of traditional and modern China.

As I sat in a room surrounded by Wang's projections, I felt the enticing sensation that sitting around watching the goings on of the world is a perfectly valid and sane way to spend the day in South East Asia. A projection of an empty plastic shopping bag blowing its way through a Chinese marketplace (instantly reminiscent of *American Beauty*) takes on new references as it floats its way through plastic choked Asia.

Unhighlighted:

Surprisingly, the use of audio in many of the installations was either non-existent, badly mastered or presented, or got caught up in the magnitude of the main exhibition space. One of the installations used an audio sample of a modem dial-up, which resonated throughout almost all of the installations in the main space.

On the night before my departure, as Eurovision took hold of my ankles, I realised that I had done everything I had set out to do while in this beautiful city.

I had managed to view a couple of weeks worth of video art (and avoided the jetlag), contacted everyone I wanted to see and have fun with, spent a day immersed in Montevideo's library, and did lots of other things I can't put in this report.

Most importantly, attending the festival helped me to see more clearly the validity of my work and it's place in the world. And on my last night, I ran into Honor Harger, a reminder that ANAT was to thank for helping me jump the big ship for a while.

Memory Plains Returning
June 2003
3d sound sculpture (live multi-user version)
Gallery 1, Cornerhouse
(Manchester), Folly Gallery
(Lancaster) + screened at
Watershed Bristol
by Adam Nash

Thanks to financial support from ANAT, and financial and/or logistical support from *Digital Summer*, Folly Gallery, Cornerhouse Gallery and Lab3D, I was able to accept Lab3D's offer to perform a live, online multi-user performance of my piece *Memory Plains Returning*, the single-user version of which was already on exhibition as a part of Web3DArt 2003.

There were three performers: myself at Folly Gallery in Lancaster, Kema T. Ekpei at Cornerhouse Gallery in Manchester, and John McCormick (of Company In Space) in Melbourne. Original plans to have a fourth performer, Alex Bradley, logged in from Watershed Gallery in Bristol, were unrealised after encountering insoluble technical difficulties with Watershed's internal network set-up. Instead, Alex Bradley presented a projection of the single-user version, which he navigated in real time.

The trip to Lab3D represented a significant chance to try out the principles of my current research, into live performance in a multi-user space using non-representational avatars, in front of an audience familiar with the medium within which the experiment would take place.

Aspects of the performance went well, whilst others did not. Both cases

provided excellent foundations for future experimentation.

The Performance

The audio-visual manifestation of the resulting performance was similar, from an audience point of view, to the single-user version seen during the exhibition. So, what did it mean for the performance to be the 'live, multi-user version'? The multi-user space (realised using VNet, an open source java/vrml client/server system) is similar to any other multi-user space common these days. However, rather than presenting as avatars that attempt to portray the person, the performers' avatars were actually parts of the audiovisual 'movements' of *Memory Plains Returning*. It was more like they were playing parts of the piece, except that in the multi-user space the performers are indistinguishable from their instruments. The piece, a gently unfolding meditation on the loss and return of memory through specific experience, is a highly 'composed' piece, meaning that the performers are conducted to carry out a predetermined set of instructions from which they don't deviate. It is analogous to a quartet playing a piece of scored music with no improvisation. Although varying degrees of network lag were expected to create a kind of enforced external improvisation, as the perception of the performance would be different at any given time at any given site. Indeed this turned out to play a larger role than was expected, and created some interesting temporal/visual phenomena that are unique to the 3D multi-user space.

Problems and Implications

CRASHING: VNet itself appears to behave unpredictably when more than a small number of users are logged in. Some, but not all, users crashed, often more than once. Whilst it was difficult

to determine precisely the cause, it created a very interesting effect - when the user logged back in again they were temporally out-of-step with those users who had remained in the space, creating a kind of 'virtual time-travel' experience. This experience is disorienting and confusing for those not completely comfortable within the multi-user space, but I think it offers another dimension for experimentation and, when marshalled in the service of the artwork, could provide another compositional tool for the artist: that of disjointed time, a knowledge that parts of the work may not be perceived in the linear order in which they are performed.

AUDIENCE EXPERIENCE: In Lancaster, I went a long way into the performance before crashing, and only crashed once, whereas Taylor Nutall, who logged in wirelessly on his laptop, crashed quite a few times. As a result of this Taylor had the unique experience of experiencing the same performance in two completely different audiovisual manifestations: the one on his laptop, and the one that was being projected onto the screen in the gallery from my computer. Meanwhile, in Melbourne, John McCormick had no crashing difficulties whatsoever and to his perception, the performance went almost exactly according to rehearsals. It was Kema at the Cornerhouse in Manchester who had the most difficulty, crashing several times and becoming quite confused as a result. Unfortunately, we had not discussed enough with him the experimental nature of the performance and as a result he didn't discuss the technical problems with the audience whilst they were happening. Therefore, the experience for the live audience present in the Cornerhouse Gallery was less than satisfactory. This is testament to

the fact that a significant portion of the rehearsal process should have been given over to discussions of philosophical, practical and performative aspects of the experiment being undertaken. At the Folly Gallery, which is an intimate space, I was talking with the physically present audience throughout the performance, and encouraged them to ask questions at any time, and concluded the performance with a discussion session. As a result, the Folly audience appeared to have an interesting and stimulating experience that was actually enhanced by the technical difficulties. This gives a great clue to the direction that performative practice needs to take in this arena - an attitude that embraces the qualities of the space, technical and metaphysical.

ONLINE AUDIENCE: Another aspect for consideration is that of the online audience - unfortunately, given the pressures of physically being in front of a live performance, not enough attention was paid to the experience of the logged-in audience. I did occasionally seek textual feedback from the online audience, who seemed happy to provide same, but I didn't explicitly engage them in a dialogue about their experience of the performance as I did the physically present audience. This is something that I definitely want to pay more attention to in the future, as it is a key point in the quest to use this medium for its native qualities. In fact, the physically present audience - indeed the entire concept of having a physical presence for the performance - is a reference to more traditional arenas of live performance art, and in strict terms should be less of a consideration in the artist's mind than that of the online presence. This is not to say, of course, that such references to the physical world are unimportant - I think it is vital

to provide those with less experience of the multi-user arena with a framework via which they are able to engage with the performative notions being experimented with. One of the most common comments from the online audience upon first logging in was "I can't see anything". In fact what they were looking at was an 'empty stage'. Whilst this analogy was easy for the online audience to accept, it took a little longer for some to realise that the performers were literally 'becoming the space' rather than human-like figures within that space.

SUCSESSES AND IMPLICATIONS: In terms of successful aspects of the performance, besides the audiovisual aspects of the work being appreciated, the entire concept of having non-humanoid, non-representational performers seemed to be received very well by online and offline audiences, as well as by the various curators and technical people involved. In particular, the audience physically present at Folly Gallery engaged with the piece in an interested and intelligent manner. This performance confirmed for me that the performative philosophy of using the qualities that the multi-user space displays natively is one that is likely to yield interesting, durable and significant performance capabilities, rather than the contemporary model of trying to use multi-user space copy the physical world, such as is displayed in many popular multi-user computer games. The potential open to a framework of using the avatar as the performance (the performer as performance) is enormous. The performers found the experience to be very positive, and are looking forward to engaging with this format in a deeper method. Given this, in a performative sense, the next level is to work with a piece that allows much more improvisation on the part of the

performers, analogous to a jazz band improvising within given melodic/harmonic structures, time signatures etc.

NETWORKING AND FUTURE OPPORTUNITIES: My trip bore excellent results in terms of connecting with people. It was very positive meeting with Kathy Rae Huffman (curator of *Web 3D Art*, and curator of visual art Cornerhouse), who for so long has been one of the major international proponents of Web-based 3D art. I also attended a seminar about Web3D Art at the ICA in London, where Kathy Rae Huffman introduced me to Professor Karel Dudesek, Head of the postgraduate course, Interactive Digital Media at the College of Design and Communication, Kent, UK. Meeting with Taylor Nutall (curator of Folly Gallery) was also of enormous benefit, as he and I established a good working rapport and enjoyed some excellent conversations about web-based 3D in general and my work in particular. I am sure that Kathy and Taylor will prove to be helpful contacts in the future. I was also able to strengthen my relationship with *Digital Summer*, as well as the Acting Head of Economic Development for Manchester City, David Carter, with whom I continued discussions of the possibility of a collaboration between Manchester, Melbourne and Montreal for telematic cultural events. In a more indirect way, but still as a result of this performance, I was able to establish good contacts with the Web3D Art community in general, through discussions on the *Empyre* mailing list, which was an official part of Lab3D. In particular, I established a dialogue with Steve Gynup of Georgia Tech (well known as a pioneer in the world of Web3D Art), and we both feel that we will be able to work together in various ways in the future, particularly through

discussions of non-representational avatars, which we hope may lead to presentations of papers on which we collaborate. Through Alex Bradley, I established contact with Watershed in Bristol, known for its presentation of cutting edge media, who expressed interest in my work. Nick Carillo, technical director at Folly and curator of Folly's online gallery 'unencoded' was also very stimulated by my presentation, and I'm sure will prove to be a lasting contact.

SUMMARY: All in all, this performance trip to Lab3D was of excellent benefit to me as a practising artist and also provided superb experimental results on which to build the next stage of my work with live, multi-user performance.

Peer Review: Steve Guynup comments on this report

I thought the empty stage was quite daring. Being unable to see, nobody really moved. Folks piled up at the opening (sic) viewpoint. Also I blame VNet's embedded Avatar selection. You had to use the arrow keys to 'break-out'. It's an interesting effect, but not really a positive one in this instance. Its neutral only if they didn't want to move. (And positive if you had played off of it somehow.)

Moving changed the performance little. Abstractly patterned space doesn't hold a strongly defined narrative story. Oddly enough I felt like Ringo in his wandering scene from *Hard Days Night*...I just wandered about, felt kinda alone even.

<snip> It took a little longer for some to realise that the performers were literally 'becoming the space' rather than human-like figures within that space.</snip>

I knew what was happening, but didn't have a strong sense that the abstractions were people. The crashes ruin my ability to really speak on this.

<snip>I think it is vital to provide those with less experience of the multi-user arena with a framework</snip>

As it stands your work unapologetically requires the audience to mentally stretch and grasp concepts they haven't had before. As an artist this is a good thing. The trick for you is to be aware this (sic) and know how to sculpt the performance to meet any concept you might have.

Basically, I think you are on the right track. Conceptually it felt strong, but the feeling of collaboration was weak.

My question is then "How can you reinforce the sense of individual humanity in the abstract forms?" You might consider ways to "introduce" the work. Film, theatre, music often create/explain a convention in the beginning and then build on it. Playing off reality rather than leaping beyond it in the beginning is one path. And if not more realistic forms - at least at the beginning, then perhaps use scale. Smaller human sized (or smaller) shapes that interact in ways that provide a framework. They could then expand larger, engulfing the audience. My Crystal Cabinet piece passively teaches the audience how to engage with it and be comfortable with abstraction.

<snip> I did occasionally seek textual feedback from the online audience. </snip>

Participation is another huge question. I've got some ideas but nothing defined. For the moment I'm content to do shorter pieces that allow for conversations between them."

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SEP/OCT/NOV Issue 58
DUE: AUG 1st 2004

ANAT welcomes information on forthcoming events relating to the interaction of art, science and technology.

New Interfaces for Musical Expression (NIME-03) Conference

22nd - 24th May 2003

McGill University, Montréal, Canada

by Ian Stevenson

With the generous assistance of the ANAT Conference & Workshop Quick Response Fund, I was able to attend the *New Interfaces for Musical Expression* Conference at McGill University, Montréal, Canada. I was accompanied by Donna Hewitt whom I have assisted with the development of the eMic Extended Mic-stand Interface Controller. Donna and I presented a joint paper at the conference, outlining the development and application of the eMic. Donna also gave a live performance of an original composition using the eMic, at one of the three concerts presented during the conference.

The NIME conference attracted delegates from around the world including the United States, France, Netherlands, Japan, Canada, United Kingdom, Ireland, Denmark, Spain, Germany and Sweden. The three day conference included ten paper presentations, nineteen reports, ten demos, a poster session, and four special presentations including expatriate Australian Garth Paine's installation work entitled *Plant A*.

NIME is a specialist conference focusing on experimental digital instrument and interface design. This year's conference was the third and largest with previous conferences held in Seattle and Dublin. NIME has gained a significant profile in the field and this conference was attended by representatives from some

of the more prominent public and educational institutions from around the world.

My work engages with our experience of sound in the contexts of the built environment, the media, entertainment and arts practice, and with the experience of the performer or composer. It is in this latter area that I have been working with Donna Hewitt in the realisation of her designs for a new interactive musical interface for live vocal performance, the eMic. The eMic is a novel approach to solving a range of technical and aesthetic issues associated with contemporary, electro-acoustically assisted vocal performance. The eMic incorporates a range of sensing technologies to capture new and existing performance gestures in order to facilitate an expanded repertoire of vocal performance with live electronics. The development of the eMic has reached the stage where Donna has employed the first fully working prototype in a composition and performance that was premiered at NIME. This was an ideal opportunity to gauge the response and obtain critically useful feedback from the world's leading specialists in the field of experimental musical interfaces.

Donna's performance went extremely well and the response was very positive. Subsequent to our paper presentation we received a number of very pertinent questions and suggestions that have assisted us in refining the concept. Specific information regarding development of some of the technical aspects of the project, including improved and proven sensor technologies and wireless and network integration was also obtained from some of the delegates. These included Sukandar Kartadinata from Berlin who was presenting his Gluiph integrated

signal processing platform; Emmanuel Fléty from IRCAM in Paris who presented new interfacing devices and gave me specific information regarding his work with wireless serial and network devices; Diana Young from MIT in Boston who provided specific technical advice on the low power interfacing and wireless transmission used in her HyperPuja Tibetan singing bowl hyper-instrument.

In addition to the nuts-and-bolts technical information, we were able to gain unique first-hand insight into some of the aesthetic issues and user experiences of some of the delegates. We benefited greatly from the performance and discussion of performance practice presented by Tomie Hahn and Curtis Bahn. We took the opportunity to reaffirm old relationships such as that with composer and sound artist Garth Paine, and to establish valuable new ones such as with EMF founder Joel Chadabe. These relationships were cemented with endless late night discussions on the relative values of the various aesthetic approaches demonstrated in the papers and the concerts.

The three concerts included a diverse range of music and performance styles all utilising new musical interfaces. The instruments ranged from adapted commercial computer interfaces, to enhanced and extended acoustic instruments, bio-sensing devices, and radically new experimental interfaces.

Attending the NIME conference has been of immeasurable, lasting benefit from both a broad professional perspective and with specific reference to the eMic project. I am grateful to ANAT for their assistance in getting me there.

New Interfaces for Musical Expression (NIME-03) Conference

22nd - 24th May 2003

McGill University, Montréal, Canada

by Donna Hewitt

Firstly, I'd like to say a very big thank you to ANAT for facilitating my attendance and participation in NIME 03, the 3rd *International Conference on New Interfaces for Musical Expression* hosted by McGill University in Montréal.

The conference presented the latest scientific and technological research in the field, along with several concerts displaying the creative and artistic applications of the technology. The conference was three full days of papers, demos, posters and reports along with three evening performances.

I was very fortunate to have both a joint paper with Ian Stevenson accepted for presentation along with a solo performance using my new interface, the eMic (Extended Mic-Stand Interface Controller), developed in collaboration with Ian Stevenson.

The eMic is a modified microphone stand, enabling a vocal performer to carry out real time computer processing of the voice. The microphone stand is fitted with an array of sensors aiming to capture the most commonly used gestures of vocal performers who use microphone stands. The eMic as an idea was very well received at the conference, delegates seeming to like the potentially broad applications of the device and the bringing together of more 'academic electroacoustic music' with popular genres. The opportunity to exchange ideas with other researchers proved invaluable, Ian and I receiving

some excellent suggestions from other delegates on technical issues relating to the future development of the eMic prototype, including wireless systems and alternate sensing technologies.

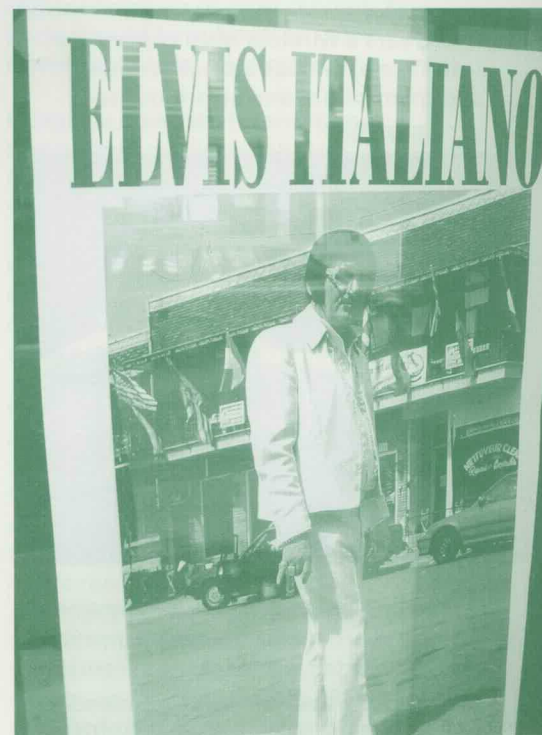
The audience feedback and responses to the performance also proved useful in helping to identify the successes and shortcomings of the eMic in a performative sense.

Some of the strengths were: 1) the novelty of a vocal interface, since there are very few dedicated vocal controllers in existence, 2) the inherent visual interest generated by the use of typical mic-stand performance practices and 3) the expressive aspects of distance based hand sensing. Some audience members expressed a desire to see more live vocal input, which serves to provide a more direct connection between gesture and sonic outcome. Overall, participants were very excited by the possibilities presented by the interface and were keen to track further developments.

One of the conference highlights for me was a performance by Michel Waisvisz from STEIM (Netherlands) whom I met and conversed with. He is renown for his alternate controller, the Hands, which was one of the first MIDI controllers to break away from the keyboard.

The Hands has been under development for twenty years thus representing a highly developed performance practice with an alternate controller. The interface consists of a number of sensors and keys, mounted on two small keyboards that are attached to the player's hands. The combination of many different sensors captures the movements of the hands, the fingers and the arms. His performance was particularly relevant to my work with voice since he had a small microphone on the Hands, which he used to sample

his voice during the performance. He used his voice as a sound source, processing and working the material via his hand gestures. I found his performance inspiring and informative in that it allowed me to observe effective strategies for mapping gestures to sonic outcomes.



Scenes of NIME-03.
Photo courtesy Donna Hewitt.

The concert series provided a concentration of high-level work in the field and it was a fantastic opportunity both attend and participate in. A highlight of the conference for me was the first-night concert by the Wireless Duo, who used alternate controllers (including the Buchla Lightning and the Theremin) to perform their score for the silent movie *Faust*, by F. W. Murnau (1926).

Another highlight was a workshop by Curtis Bahn and Tomie Hahn on their collaboration known as *Pikapika*. The workshop included a very beneficial discussion on performance and mapping strategies along with a performance demonstration by the dancer Tomie Hahn, who adopts the cyborg persona known as Pikapika.

She wears a wireless MIDI control interface as well as a small wireless stereo amplifier and arm-mounted



*Paper presentation at NIME-03.
Photo courtesy Donna Hewitt.*

speakers. This was a highly rehearsed, impressive performance again with very effective mapping of the bodily gestures to the sonic outcomes, providing me with much inspiration for future compositions and performance strategies with the eMic.

The research presented at the conference was diverse, including hardware and software developments. There was an array of alternate controllers based on existing instruments as well as purpose built controllers, DJ interfaces, motion capture systems, musical creation using chemical reactions, improvisational

devices for children and a very interesting interactive system called Sonic City which enables users to interactively create music by walking through a city, factors like noise and air pollution being used as musical parameters.

The conference overall was very stimulating, I had the opportunity to participate in discussions with some of the key figures in the new interfaces field. As usual the informal contact over lunches, dinners and in the corridors was as valuable and significant as the formal sessions in that it allowed me to further links and contacts and discuss specific aspects of the eMic project with high profile colleagues. One such contact was Professor Joel Chadabe, an eminent figure in the field who has invited me to collaborate with him on a work utilising the eMic.

Thanks again to ANAT for the opportunity to attend and present at this very unique international event.

The Fifth Exhibition and Colloquium of Digital Art 16th-20th June 2003 Havana, Cuba by Irene Hanenbergh

From the 16th of June to the 20th of June, I attended the *V Salon Y Coloquio Internacional de Arte Digital* (Fifth Exhibition and Colloquium of Digital Art) in Havana, Cuba at the Centro Cultural Pablo de la Torriente Brau.

The conference and exhibitions were very well organized from start to finish and the staff at the Cultural Centre Pablo de la Torriente Brau were extremely helpful in assisting my

attendance and for all general arrangements.

Artists from 39 countries as well as artists from the host nation were presented in the exhibitions in eight exhibition spaces: Centro Pablo (Pablo Center), Casa de la Poesía (House of Poetry), Centro de Desarrollo de las Artes Visuales (Center for the Development of the Visual Arts), Fototeca de Cuba (Cuban Photograph Library), Galería Carmen Montilla, Galería Servando Cabrera Moreno del ICAIC (ICAIC's Servando Cabrera Moreno Gallery) and Museo Nacional de Bellas Artes (National Fine Arts Museum).

The *International Colloquium of Digital Art* is a forum for critical discussion, and papers and presentations by artists were discussed in round tables and lectures. The conference provided a great setting for the exchange of criteria about digital art and its perspectives, focusing mainly on communication in art (the artist and the word).

The event itself was an intense week of presentations, exhibitions, screenings, networking and discussions. All attendees tried very hard to fit in as much of the schedule as they could in the very little time available. In the same time we were all very eager to explore (in almost daily-tropical storms) the complex history, vibrant culture and people of Havana.

Participants also engaged in an extensive range of media and arts practices. At the event I had the opportunity to meet with a number of artists working in media and subject matter varying from internet dating and performance art to hologram techniques; from print based work to a range of animation, interactive and video techniques and concepts.

Interesting presentations at the festival itself were many including:

Heather D. Freeman (USA) on Internet dating services and Dating and art. Her paper, *New University Interactive Communications Program*. In short *Front v3.0* consists of 2 lightweight wearable suits that both contain offensive and defensive inflatable air sacs. When the participants growl or sing, their own offensive sacs inflate, along with the other participant's defensive sacs. If both players are loud enough, both suits will be entirely inflated. When the players are quiet, the suits deflate.

Lauri Burrier (USA) presented *Waterstreet* that comprised gigantic prints on vinyl exhibited site-specifically in NYC as a flowing river in a downtown NY street. In one of the discussions, Lauri talked about how TV sets and home theatre systems provide an opportunity to screen video art in the every-day-home environment. She explained the ease with which collections of video and digital works can grow when nearly everyone has a screen-space (hooked up to VCR or DVD player) to display art. Lack of physical space to store or maintain an art collection can't be an excuse anymore.

Attending this event offered me - as an artist - benefits that are many and varied and will manifest themselves in many different ways and for a long time after my return. Additional to the event, the location of Havana offered an incredibly visually rich and magical place from which to be inspired. It is impossible to not let the city, the people, its culture and architecture, completely take over your senses.

I was fortunate enough to establish many new professional contacts with Cuban and other international artists and possible future joint-projects with some

of the participating artists were discussed. Some plans have taken off further since my return to Australia. One of them is a joint project with a small group of Brazilian video makers and we are discussing the possibility of an exchange screening of video works.

I also had the opportunity to visit Cuban artists in their studios which was interesting because discussions usually take a different turn when not in a public space and it becomes a lot easier talking about political, religious and social issues and the effects they have on artists when exhibiting work.

One of my videos was presented in Gallery Carmen Montilla and additionally all videos and interactive work were accessible on terminals throughout the festival locations. By participating in the exhibition and attending the conference, I received valuable critical feedback from fellow artists. It gave me the ability to respond directly to questions and discuss ideas further.

The work exhibited at the festival exhibitions and also in other galleries and museums in Havana (in particular at the Wifredo Lam Centre) were visually challenging. A lot of times I had the feeling of slipping out of the real world and into a fantasy one - a surreal kind of feeling I very much enjoyed. This was most likely due to my love of imaginary places, tale telling and historically defined symbolism. An important part of my work is based upon storytelling/mythology and collecting symbolic imagery and local folk-tales was one of my aims. The opportunity to travel to Cuba allowed me to gather quite a few.

I am very grateful for the opportunity to have been part of this festival. It was a rewarding experience and it enabled me to gain insight into alternative viewpoints in art/ technology and to extend my professional network. The support from the Conference and Workshop Fund of the Australian Network for Art and Technology was greatly appreciated.

NOTICES

ANAT Conference and Workshop Fund

Please note that there will be no December round for the Conference and Workshop Fund. Applications for events commencing on or after January 21, 2004 should be submitted in the November round (closing Nov 30, 2003).

ISEA2004: The 12th International Symposium on Electronic Art

DATES: August 14th - 22nd 2004
Stockholm; Tallinn; Helsinki

new media art - media culture research -
electronic music - art and science -
cultural and social applications for new
media -

New media meets art, science, research, and popular culture at ISEA2004 in Stockholm - Tallinn - Helsinki. For the first time an event of this scale is being organised between three cities and on the ferry travelling between these three Baltic countries. International participants and local audiences attend thematic conferences, exhibitions, live performances, screenings, satellite events, concerts and clubs. Many events are also interfaced via television, radio, broadband Internet, and mobile networks.

At ISEA 04 you can expect to see:
Socially, critically and ecologically engaging work; Projects that bring the creative media to the streets; Projects that are worn on or inside people; Context sensitive work in the museums; Projects that float, dock or sail; Screen based media as it appears in 2004; Sea Fair: technological gizmos for ferry travellers and future media archaeologists to discover; Bridges between club scenes and art venues;

Most engaging works from performing arts that engage new media, users, and audiences; Networks to network...

Key themes for the event include:
Networked experience (Stockholm)
Wearable experience (Tallinn)
Wireless experience (Helsinki)
Histories of the new: media arts, media cultures, media technologies
- all cities

Additional themes include:
Open source and software as culture (Helsinki)
Critical interaction design (Helsinki)
Geopolitics of media (Tallinn)
Interfacing sound (Helsinki and on the Ferry - in collaboration with Koneisto - <http://www.koneisto.com>)

For full details:
ONLINE: <http://www.iseazoo4.net>
EMAIL: info@iseazoo4.net

Cybernetic Garments at the space between textiles_art_design_fashion conference

DATES: 15 - 17 April 2004
Perth

The space between conference and associated events will centre on the new creative and theoretical potentialities that have emerged from the blurring of the boundaries between art, fashion, textiles and other creative/design disciplines. It will provide an international forum for the presentation of new ideas, current research and an in-depth exchange of ideas and experiences.

One particular focus of the conference will be the potential and consequences of the uptake of 'new' technologies and techniques (bio, nano, digital, other) in the creation of 'cybernetic garments', utilising re-oriented notions of 'garment', 'technology' and 'cybernetic'.

For further information, newsletter subscription, registration, keynote speaker details, visit the conference website. For further information specific to the Cybernetic Garments focus, contact:

INFO: Andrew Hutchison,
EMAIL: a.hutchison@curtin.edu.au
ONLINE: <http://www.thespacebetween.org.au>

FutureScreen03, Plaything: digitalgames/art exhibition+symposium Choose Your Weapons!

SYMPOSIUM DATES: 10th-12th October
SYMPOSIUM VENUE: Sydney Uni Auditorium, Eastern Ave Auditorium
EXHIBITION DATES: 8th-19th October
EXHIBITION VENUE: Firstdraft Gallery 116-118 Chalmers St, Surry Hills Sydney

Plaything is a major international event focusing on current and future trends in the field of digital games, featuring key Australian and international game designers, theorists and artists. The symposium, exhibition and catalogue provide platforms for discussion, play and critical discourse, bringing together people that develop, analyse and play digital games. Plaything is curated by Josephine Starrs.

Plaything symposium presented in association with the University of Sydney.
Keynote address: 6.30pm Friday 10 October 2003
Symposium: 11 and 12 October 2003
Venue: Sydney University Auditorium, Eastern Avenue Auditorium.
Registration: Download a registration form at www.dux.org.au or phone 02 9380 4255.
Keynote Speakers: Mary Flanagan (USA) digital artist and cybercultural critic and Eric Zimmerman (USA) co-founder and

CEO of Gamelab New York.
Plaything Exhibition: Opening 8 October 6pm - 9pm until 19 October 2003.
Firstdraft Gallery 116-118 Chalmers Street, Surry Hills, Sydney.

For a full list of symposium speakers, exhibiting artists, information on registration and the catalogue please visit www.dlux.org.au

INFO: Vicky Clare
PH: 02 9380 4255

ORB // remote
<http://www.ORBremote.com>

The idea of ORB // remote is not to be a net.art.project but to assemble digital projects by artist's, dealing with social, economical, cultural, political and scientific issues, tracing invisible structures in society.

ORB //remote will continue until September 2004, to live online in different shapes.

ONLINE: <http://www.ORBremote.com>

Please tell me about your dreams... Call for Contributions
ARTIST: Lynne Sanderson
ONLINE: <http://sustenance.va.com.au/dream.html>

I am in the process of collecting dreams to incorporate into a new artwork. I have set up an easy online form you to fill in. This form is anonymous.
<http://sustenance.va.com.au/dream.html>
I would appreciate any contributions.... wild or wacky or just plain boring! I am looking at collecting dreams from as large a cross section of people as possible, so please pass this URL onto others.

DISContact! III: A 2-CD compilation of electroacoustic works

Canadian Electroacoustic Community (CEC)

The CEC is pleased to announce that DISContact! III has now been released! DISContact! III provides yet another example of the CEC's commitment to promoting and fostering electroacoustic music and sonic art from Canada and abroad.

The project began a year ago with an international call to composers for electroacoustic works of short duration (under 5 minutes). Participation was open to all, not only CEC members. Over 100 composers submitted pieces, and an international jury had the challenging task of choosing the forty works that appear on this double CD.

The DISContact! series is renowned for its international representation - this edition features 40 works from composers living in 12 countries - and for promoting an impressively diverse range of contemporary electroacoustic practice. DISContact! III is a sonic extension of eContact!, the online magazine of the CEC. The latest eContact! features all pieces submitted to DISContact! III (in mp3), articles about 'short form' electroacoustic works, and complete composer biographies and programme notes: http://cec.concordia.ca/econtact/electro_shorts/

This double-CD compilation of short ea works will be sent to all paid-up CEC members. The membership deadline to be included on the mailing list is Sept. 1, 2003.

DISContact! III can be obtained through DIFFUSION i MÉDIA:
<http://www.electrocd.com/doc.e/cec.html>

The International Festival of New Technologies, Art and Communication: Call for Entries

FESTIVAL DATES: 23rd-30th April 2004
Bilbao

The International Festival of New Technologies, Art and Communication: Ciber@RT Bilbao 2004 has opened its registration period for the Call for presentation. Those interested can present their work to the various sections of the festival: Net-Art, Off-Line Multimedia Projects, International Conference, Computer-generated Animation, "Minimisation" and Interactive Installations.

Under the theme "Challenges for a Ubiquitous Identity", the festival will take place in Bilbao from the 23rd to the 30th of April.

The 2004 festival is organised by the Town Hall of Bilbao through the following entities: Fundacion Bilbao Arte, Lan Ekintza and Bilbao Iniciativas Turisticas.

Those interested can find the Call for participation on the festival web page www.ciberart-bilbao.net. The deadline for presenting papers for the congress is the 30th of November 2003 and the deadline for the artwork is the 15th of December 2003.

Ever since its start, the festival first opened in 1995, its main goal has been to approach the essential elements of artistic production through digital media and to contemplate the changes produced in society as a consequence of the presence of resources, processes and mediation of technology. Ciber@RT has become a world showcase for the art of new media and contemporary research.

For more information:
ONLINE: <http://www.ciberart-bilbao.net>

JavaMuseum: Forum for Internet Technologies in Contemporary Art

Call for entries: Netart from Asian-Pacific area

ENTRIES DUE: 5th January 2004

Currently, JavaMuseum is planning new features for the "3rd of Java series" 2003/2004, focussing on netart from particular cultural regions on the globe.

For February/March 2004, a feature exhibition will be prepared under the working title, "Netart from Asian-Pacific area", in order to pay more attention to this globally emerging cultural region, which is related to netart widely unknown in the Western countries.

All artists, who work netbased and are born or have their residency in one of the countries of this area are invited to submit and participate. All serious submissions will be included.

Please use following entry form for submitting:

1. firstname/name of artist, email, URL
2. a brief bio/CV (not more than 300 words only in English, please)
3. title and URL of the max 3 projects/works,
4. a short work description for each work (not more than 300 words only in English, please),
5. a screen shot for each submitted work (max 800x600 pixels, .jpg)

Please send your submission to:
EMAIL: asianfeature@javamuseum.org
ONLINE: <http://www.javamuseum.org>

Resonant Cities: Call for Sound Works New Media Scotland

New Media Scotland seeks sound works for 'Resonant Cities': Internet radio streaming that explore the sonic identity of our surrounding space and that engage with the fragmented 'noise'

of the city soundscape: people, traffic, communication intrusions, mobile phones, radio traffic, city wildlife, buildings... We are particularly interested in audio works which involve one or several of the following ideas or processes:

- Acoustic Ecology - Acousmatics - Phonography - Sonic research - Radio art, Internet radio - Microsound - Lowercase sound - Internet communication media and audio streaming - Electronic communities - Artists' software for sound and music - Sound work developed using open source processes and principles - Generative sound - Sound archives - Spoken word / oral history - Field recordings - The re-purposing / representing of existing analogue sound recordings, such as amateur recordings, scientific recordings, and accidental, lost or abandoned recordings -

The works selected by the Drift team will then be curated into themed streams that will be available via this web site.

Our intention is to expand the audience for the work, encourage appreciation of sound art, and broaden access to a genre which is too often labelled as esoteric and inaccessible. We cannot pay a fee for this opportunity, but we will facilitate the broadcast of your work.

Eligibility - Open to artists, musicians, producers in the UK and across the globe.

Guidelines and submission form available from:

ONLINE: <http://www.mediascot.org/drift>

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ANAT is Australia's peak network and advocacy body for artists working in the interaction between art, technology and science.

www.anat.org.au



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

ANNUAL MEMBERSHIPS

Please note that the Australian membership fees listed below are GST inclusive.

Individual:	AUD\$30.00
Concession:	AUD\$15.00
Organisations:	AUD\$60.00

NB: Concession rates are available to relevant card holders (ie. student, health care, pensioner) and low incomes (ie. below \$25,000 per annum)



ANAT is assisted by the Commonwealth Government through the Australia Council, its arts funding and advisory body, and by the South Australian Government through Arts SA.

ANAT

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