Computer music in New South Wales

GORDON MONRO

School of Mathematics and Statistics, University of Sydney F07, NSW 2006, Australia
E-mail: G.Monro@maths.usyd.edu.au

This article is a brief survey of academic computer music activities in New South Wales.

1. INTRODUCTION

In this survey, I am concerned largely with 'academic' computer music, by which I mean computer music made by people who have degrees in music or otherwise are in contact with art music.

Australia is divided into States which, on the whole, are very centralised, with one major population centre (the State capital) in each state. In the southeast, the State capitals, Adelaide, Melbourne, Sydney and Brisbane are strung out on an arc with the best part of a thousand kilometres from one city to the next; each city has developed its cultural life somewhat independently. Thus it makes sense to consider one centre by itself. The national capital, Canberra (which is in its own Territory and not part of any State), is much smaller than the other cities mentioned, and has also developed along its own path.

New South Wales (NSW) has an area three times that of the UK (and is bigger than Texas), but of its six-and-a-half million people, four million live in Sydney and another million or more within relatively easy reach of Sydney. Thus an account of computer music in NSW is essentially an account of computer music in Sydney. Even in Sydney, the 'academic' computer music community is small and scattered, Sydney itself extending more than fifty kilometres north, west and south from the Opera House.

2. MARTIN WESLEY-SMITH AND THE SYDNEY CONSERVATORIUM

Academic electronic music started in Sydney in 1974, when Martin Wesley-Smith was appointed to the Sydney Conservatorium (which at that time was the main campus of the NSW State Conservatorium) and set up a tape studio. Martin had become interested in electronic music while studying at the University of Adelaide in South Australia, and gained access there to the first Moog III in Australia. (This was before the pioneering Tristram Cary came to Adelaide.) Martin then completed a D.Phil. at the University of York under the supervision of Richard Orton, before returning to Australia and the position in Sydney.

At first the studio was fairly primitive, using borrowed tape recorders, but it later acquired the second Moog III to be brought into Australia, and a VCS3 voltage-controlled synthesizer. In 1980 the Conservatorium acquired one of the first Fairlight Computer Musical Instruments. Fairlight was (and is) a Sydney company, being named after a ferry which was in turn named after a harbour-side suburb, and the Conservatorium collaborated with Fairlight in research and development. In 1986 Martin, together with Ian Fredericks (mentioned below) went to Beijing and established the first computer music studio in China at the Beijing Central Conservatory of Music around a Fairlight machine.

Another important development was the acquisition in 1983 of a system (Clear Light Superstar) which linked nine slide projectors to an Apple IIe computer. All nine projectors would be focused on the same screen, and a variety of superpositions, fade-ins and fade-outs, and a limited form of animation could be achieved (though each projector was limited to one carousel of slides). The image quality was superb, far exceeding what could be obtained with video.

The system continued in use for about fifteen years, long after the Apple IIe should have been retired. I was one of a team who presented a concert using the equipment in Townsville (North Queensland) in 1994. The gear was freighted there, and we set up during Sunday for a concert that evening. We found during the afternoon that the keyboard of the Apple IIe froze when the machine was turned on. We arranged for an appeal to be broadcast on a local radio station, which produced lots of offers of Apple IIc computers, but they were no use to us, as we needed to use a special card. Eventually we discovered an Apple IIe for sale in the classified ads in the local newspaper, and arranged to hire it. In fact it wasn't needed, as Jon Drummond (who was running the slides) found that if our Apple IIe was started when cold, he had about thirty seconds to launch the program before the keyboard froze, and it didn't matter if the keyboard failed to work once the program was under way.

Martin Wesley-Smith has composed in many genres; in particular his involvement in choral music predates even his electronic compositions. Perhaps the best known of his electroacoustic works are his tape and

Organised Sound **6**(1): 55–61 © 2001 Cambridge University Press. Printed in the United Kingdom.

https://doi.org/10.1017/S135577180100108X Published online by Cambridge University Press

instrument pieces, in particular *For Marimba and Tape and Balibo* (for flute and tape). *Balibo* refers to the Indonesian invasion of East Timor in 1975, and specifically to the deaths of five Australian journalists. The piece was the major competition piece at the Australian Flute Convention in 1999. Martin has combined choral music and electronic music in his electronic music theatre piece *Quito*, concerning an East Timorese refugee in Australia who suffered from schizophrenia and eventually committed suicide.

Martin has been the driving force behind much of the computer music activity in Sydney over the last twenty-five years.

3. IAN FREDERICKS AND GREG SCHIEMER

With Martin Wesley-Smith, two other people who have contributed greatly to electronic and computer music in Sydney are Ian Fredericks and Greg Schiemer.

Ian Fredericks encountered Martin Wesley-Smith shortly after Martin arrived in Sydney, while Ian was studying at Sydney University. Ian joined Martin in forming the multimedia performance group **watt**, discussed below, in 1976. Ian then joined the staff of the Music Department of Sydney University, where he eventually had a rather difficult dual technical and academic role: he founded and ran the studio in the Music Department (the Sydney University Experimental Sound Studio, or SUESS), was responsible for fixing broken tape recorders and the like, and recording concerts, but also taught courses in electronic and computer music. The Music Department had obtained a grant for a Unix minicomputer, and Ian developed a suite of programs for sound synthesis and in particular spatialisation. The system was capable of eight-channel playback in the 1980s, and was somewhat ahead of its time. Ian became chronically ill at the start of the 1990s and was prevented from properly developing this work. Nonetheless, he completed some substantial compositions with the system, often employing relatively simple means such as FM synthesis, handled with great care and often controlled by algorithms of Ian's devising. Ian later continued this work on PCs, leading to works such as his *Mist* series.

Ian has long been interested in the relationship between sound and image; a landmark piece in this regard was *Some Quiet Graveyard*, the graveyard being the planet Earth 'hanging raggedly off an insignificant star in a minor galaxy somewhere on the outskirts of the universe'. The music was a four-channel tape made by Ian using hardware he had built to control an Apple II; the visuals were obtained by fitting the slide projector system mentioned above with red, green and blue filters, and mixing these colours at different intensities. The piece also exemplifies Ian's engagement with cosmic themes.

Greg Schiemer came to electronic music by a somewhat circuitous route: he originally intended to be a Catholic priest, but his interest in music was fostered in the seminary, and he eventually left to study music in the Music Department at Sydney University, where Peter Sculthorpe was his first formal composition teacher. Greg also learnt computer programming (Fortran) at the University, for the purpose of using computers to program music. Shortly after graduating in 1972, Greg collaborated on a dance project involving four theremins, and from that time on, he became involved in designing and constructing electronic apparatus for music-making. Greg developed dance pieces involving computer-controlled analogue synthesizers, in one case using light-sensitive controls activated when the dancers struck matches (on a blacked-out set). In the mid-1970s Greg trained as a computer technician and was employed by Digital Equipment Australia.

Around this time, Greg and another experimental musician, Ernie Gallagher, entered a popular TV talent quest, in the spirit of 'guerilla-art'. They gave simultaneous performances of John Cage's 4′33″ (in which the pianist does not play anything) and Gallagher's *Stethophonics for Solo Audience* (in which sounds are heard only by the performer). The performance gained the lowest score in the show's history.

Greg co-founded, with choreographer Jacqui Carroll, a group known as 'The Ashes of Sydney'. In 1977 or thereabouts the group organised a 'Ferry Concert' on Sydney harbour. The audience travelled by ferry between various wharves where most of the performances took place. A substantial number of composers, dancer/choreographers and performers took part. This event, billed as 'The Ashes of Sydney Festival', was the forerunner of the Wattamolla events mentioned below.

Greg eventually moved into academia in the mid-1980s, first at the Canberra School of Music, and then at the Sydney Conservatorium, where he joined Martin Wesley-Smith in 1986. As well as continuing to build instruments using a mixture of analogue and digital technology, Greg has also pursued a variety of technical research projects and is currently collaborating with Lake Technology, who make DSP equipment for sound spatialisation and sound enhancement.

Ingenuity and an ability to make do with available materials have until recently been considered as an essential part of the Australian character; indeed, there is a folk song called *Stringybark and Greenhide* celebrating the materials of bush construction. Ian Fredericks and Greg Schiemer have both been very much part of the 'build-it-yourself' tradition, neither being afraid to re-invent the wheel. In fact, Ian used to point out that the wheel had to be re-invented for the moon buggy used in the Apollo programme.

4. WATTAMOLLA AND THE WATT CONCERTS

The performing group **watt** was founded by Martin Wesley-Smith together with Ian Fredericks in 1976. It

https://doi.org/10.1017/S135577180100108X Published online by Cambridge University Press

always had an experimental and multimedia focus. The 'Ferry Concert' mentioned above (in which Martin was involved) led to other outdoor events; from 1979 on these took the form of large outdoor theatre events at Wattamolla Beach, just south of Sydney. They were presented by an organisation called TREE (Theatre Reaching Environments Everywhere), one of whose leading spirits was the artist George Gittoes.

The Wattamolla events involved slide and film projections, dancers, acrobats and others, with music composed and/or performed by **watt**. The location was spectacular, with the performers on top of, or half-way up, a cliff which drops to a lagoon. The audience sat on a sand-dune on the other side of the lagoon. The last event was in 1982.

The **watt** group continued after the end of the Wattamolla events as a loose collective based on the studios at the Conservatorium and the Sydney University Music Department, which put on concerts in traditional theatres, much of the time in the Seymour Centre at Sydney University (until free access to this centre suddenly vanished). The concerts involved images, dancers, and live and taped electronic music, and made extensive use of the slide projector set-up mentioned above. The sound was always of very high quality, Ian in particular being very concerned to ensure this.

The most memorable compositions for the projectors used the photography of George Gittoes, mentioned above in connection with TREE. George is an artist and photographer who during the 1990s visited several of the trouble spots associated with the 'New World Order'. He was attached unofficially to the Australian Army when it was carrying out relief work in Somalia, and came back with stunning and disturbing photographs, which formed the basis for the **watt** piece, *Dry Solace*. (This was the piece taken to Townsville, where it was shown to the soldiers who had been part of the relief effort.) Later George went to Bosnia during the civil war, and his photographs from this journey formed the basis for *Red Drina*, with music by Julian Knowles and Jon Drummond, and audio-visual programming by Jon Drummond.

Over time, the **watt** concerts involved a large number of people ('Watties'), including most of the computer musicians mentioned in this article, and introduced many students to the agonies and delights of staging concerts. The concerts ceased at the end of the 1990s with the retirement of Martin Wesley-Smith.

A spin-off from **watt** was the live electronic performance group OHM, using samplers, synthesizers, keyboard, wind and drum controllers. The group flourished in the late 1980s and early 1990s. The members, who were all also associated with **watt**, included Julian Knowles, Jim Franklin, Fiona Allan, Anthony Hood and Jon Drummond.

During most of the 1990s it is reasonable to say that the leading figures in computer music in Sydney were Martin Wesley-Smith, Greg Schiemer and Ian Fredericks, and that the **watt** concerts were by a long way the most significant public events for computer music in Sydney.

5. THE INSTITUTIONS NOW

Although many students now have home systems comparable to those in an academic computer music studio, the institutions are still important for systematic training and as meeting-places for ideas. Certainly there is a community of computer music people, most of whom have degrees in music, which is distinct from the community of sound artists, who on the whole have studied at art colleges and have no formal music training. This indicates that the institutions still have a big effect on artistic endeavour, despite the democratisation of the technology.

There are six Universities in Sydney and five more in the rest of NSW, but to my knowledge significant activity in academic computer music is currently concentrated in two places, the Sydney Conservatorium of Music and the Music Department at the University of Western Sydney.

Unfortunately, the University sector in Australia has been going through a very difficult time and contraction is much more likely than expansion just now.

5.1. The Sydney Conservatorium of Music

The Sydney Conservatorium was the dominant part of the NSW State Conservatorium of Music (which also had branches outside Sydney) until 1990, when the Federal Government orchestrated a frenzy of amalgamations which saw the Conservatorium removed from the control of the State Government and transferred to the University of Sydney. I think this move was not wanted by anybody except a few bureaucrats, and the Conservatorium appears to have done its best to continue to function independently.

The Sydney Conservatorium has a long history of involvement in electronic and computer music, some of which is detailed in the interview with Ian Fredericks published elsewhere in this issue. In the Composition Unit it has an extensive list of courses in electronic and computer music, which until recently were run by Martin Wesley-Smith and Greg Schiemer. However, Martin retired recently and will not be replaced. There are also separate music technology courses, which focus on training school teachers. Fairly recently, the composer Anthony Hood (who is an ex-Wattie and has a D.Phil. in composition from York) joined the Conservatorium and has been teaching music technology.

The Conservatorium has been the most important institution in Sydney for computer music by far, and it seems to have reasonable prospects of continuing this role. At present, it is undergoing a politically contentious reconstruction and enlargement of its main building

https://doi.org/10.1017/S135577180100108X Published online by Cambridge University Press

(which is of heritage significance, as it was originally the quite grandiose stables of the NSW Government House). The reconstructed building will have good facilities for electroacoustic music, and may at last provide a suitable venue for concerts, something which has been a serious problem. Unfortunately, the NSW Government will be the owner of the building, and reportedly has its own plans for the various spaces 'when they are not being used for teaching'.

5.2. The University of Sydney Music Department

The University of Sydney has had a small but innovative Music Department since 1947, with a strong focus on composition. Recently, Peter Sculthorpe (now retired) and Anne Boyd have been the main composition teachers, with part-time contributions from, among others, Ross Edwards. As noted above, Ian Fredericks was both studio technician and electronic music teacher until his retirement through ill health.

Although the Department has been sympathetic to computer and electronic music, it has not been a core priority. After Ian's retirement, the studio fell into disuse for a little while. The Department then obtained a grant to re-equip it with Macintosh computers, and in the mid-1990s the studio was quite active, with courses in Csound, digital sound processing and Max as well as the usual MIDI/sampler/sequencer introductory course. These courses were all taught by casual teachers, including Jim Franklin, Jon Drummond and Gordon Monro, and all had a focus on composition. Ian Frederick's successors, first Peter Mumford and then Peter Thomas, did not undertake formal teaching, but, as the only ongoing staff associated with the studio, contributed an immense amount of informal assistance to students.

Unfortunately, continuing funding cuts have severely damaged the Department's teaching programme. Money for casual teaching has dried up, and at present the only courses taught in the studio are the introductory studio course and a course on music publishing (Finale). In the background is the unresolved question of the relationship between the Department and the Sydney Conservatorium, which are both parts of the University of Sydney. At present, there are two separate B.Mus. degrees with different traditions and requirements. Apart from anything else, the physical locations are just far enough apart to make joint teaching difficult.

5.3. The University of Western Sydney

A fairly new University, the University of Western Sydney was formed from a number of teachers' colleges and other institutions in Sydney's Western suburbs (a large and in general under-privileged area). It has a Music Department within a School of Contemporary Arts; two electroacoustic musicians are on the staff, Jim Franklin and Julian Knowles (mentioned above in connection with OHM). Jim has become a master player of the shakuhachi and is known for improvisations using the shakuhachi, keyboards and effects units. Julian has performed extensively using electronic instruments, composes soundtracks for film and television and is known as a sound designer and sound editor.

Also in the Music Department is Ian Shanahan, a mathematically inclined composer who was quite heavily involved with **watt**, but more recently has concentrated on composition for acoustic instruments.

The students at the University of Western Sydney are more likely to play rock guitar than cello, and so are arguably more at home with technology than if they were more 'classically' inclined. There are well-equipped and well-used studios, and students may major in music technology (as well as performance, composition or musicology).

6. OTHER ACTIVITIES

Of course, not all the computer music activities in Sydney take place in the institutions mentioned above. Here is a sampling of other activities and events.

Macquarie University (in Sydney's northern suburbs) does not have a Music Department, but for a while in the 1990s it had a single music staff member, Richard Vella, located in Science. Richard is primarily known as a music theatre composer, but has a strong interest in technology. He organised a variety of courses, and there were some interesting outcomes; for example, Richard's presence enabled Jon Drummond to obtain a Master's degree in computer science at Macquarie with a thesis on the design of computer interfaces for composers.

At roughly the same time, Gordon Monro organised a series of computer music seminars at various locations. In a way these were too successful, as they attracted two quite different groups of people, 'computer music composers' and 'sound artists', and they had conflicting interests.

Unconnected with **watt**, but involving some of the same people, has been the concert series now called 'Live Wires', organised by Gordon Monro, Anthony Hood and Jon Drummond. These have been more traditional than the **watt** concerts, with a focus on tape pieces, and instrument and tape pieces (when performers can be obtained).

A performing group with multifarious activities is Australysis, and in particular the Australysis Electroband, led by Roger Dean. Their activities include improvisation (with acoustic instruments plus DSP, electronic instruments and networked computers), text-based computer-controlled poetry/art, and interactive image processing. They have released CDs, CD-ROMs and web pieces. A number of well-known jazz and classical players have collaborated with them.

Another performer/composer using technology in a

https://doi.org/10.1017/S135577180100108X Published online by Cambridge University Press

unique way is Rik Rue, who has been known since the early 1980s for his live analogue tape manipulations, and has extended this work to minidiscs and other digital technology. He has also composed soundscapes using recordings of environmental sounds, radiophonic works and sound installations. He, Julian Knowles and Shane Fahey constitute the performing group 'Social Interiors'.

Music technology courses are taught in several places apart from those already mentioned. Two outside Sydney are at Southern Cross University at Lismore, where the course has a popular music focus, and at the Newcastle Conservatorium (part of the University of Newcastle) where a Master's in Music Technology has just been introduced. In general, the music technology courses are designed to enable people to use technology efficiently to make, or teach, traditional genres of music, though more experimental work does sometimes emerge.

6.1. Sound art

The people mentioned so far in this article in general have strong musical backgrounds and (current or past) links to academic music departments. There is also a lot of work which is more likely to be called 'sound art' than 'music', done by people who in general do not have links to academic music departments, but are quite likely to have links to art colleges, and an involvement in some form of rock or pop music. I have had very little contact with this work, so I cannot comment in detail on it.

The art colleges have sound studios, and include some courses on sound in their programmes. For example, the College of Fine Arts of the University of NSW has a Time-Based Arts stream, including a couple of courses on sound. Another home for sound artists is schools of media and communications. For example, the University of Technology, Sydney has a Department of Media and Text, with several members who are interested in sound and music: one of their interests is 'auditory culture' (the cultural history and theory of sound, voice and listening). The artistic focus is certainly on sound art rather than art music.

One venture which combines sound art, experimental and underground music, and music created with a high level of technology is the l'audible Web site (see http://www.laudanum.net/), which is curated by Caleb K., who is also a research student in the University of Technology.

I do not want to imply that there is a complete separation between the computer music composers and the sound artists: obviously there are cross-links. However, they do seem to form two rather distinct communities.

And of course, there are always unclassifiable activities, such as the 'environmental infrasound recordings' of Densil Cabrera, consisting of experimental data greatly speeded up. Densil works in acoustics and psychoacoustics in the Faculty of Architecture at the University of Sydney. One of his pieces represents the tides around Australia, the twelve-hour tidal period being speeded up by a factor of 32,000,000 to produce a high-pitched sound with subtly varying amplitude and harmonic content.

6.2. The ACMA conferences

For computer music in Australia as a whole, the most significant events in recent years have been the conferences organised on behalf of the Australasian Computer Music Association (ACMA). In the early 1990s there were Composers' Conferences every two years. The 1992 conference had successful sessions on computer music; in 1993, Gordon Monro and Anthony Hood organised the first ACMA conference as a one-day event, to fill the gap before the scheduled 1994 Composers' Conference. However, funding cuts meant that in fact 1992 was the last Composers' Conference, and the ACMA conferences have continued every year since 1993, being held at various institutions in Sydney, Melbourne, Brisbane, Canberra, Auckland and Wellington. ('Australasia' means 'Australia and New Zealand', and is sometimes taken to include the Pacific islands – the name is not an ambit claim to take over Asia.)

Since 1993 the conferences have grown to be three-day events, with the usual mix of papers and concerts. The 2001 conference will be held at the University of Western Sydney.

7. INFLUENCES

I think that the descriptions of individuals' work in this article indicate that although the computer music community in Sydney is small and scattered, it includes a wide variety of approaches. It has been said that Australian composers in general resist joining schools, and this is possibly even more true for computer music composers, who are always seen as outside the mainstream.

That being said, the members of the local computer music community are connected in various ways. Almost all the people mentioned have studied at the Sydney Conservatorium or the Sydney University Music Department, or both. They were also involved in **watt**, and so one way or another came into contact with Martin Wesley-Smith, Greg Schiemer and Ian Fredericks. Admittedly, these three people have rather diverse approaches.

Also, many of the local community have come into contact with possibly the nearest thing Australia has to a composition school: Peter Sculthorpe, Anne Boyd, Ross Edwards, and some of their students. These people are composers for conventional instruments rather than computer musicians, though some of them had considerable involvement with tape music in the past. As a group

https://doi.org/10.1017/S135577180100108X Published online by Cambridge University Press

they tend to use Australian and Asian themes in preference to European ones, and tend to meditative rather than aggressive music (though this is a gross over-simplification).

As for European and American influences: there is a connection between Sydney and the University of York. Martin Wesley-Smith and Anthony Hood have D.Phils. from York (as does Anne Boyd). Most of the other people mentioned studied in Australia, and there is certainly a feeling that we have a home-grown tradition here, not just a remote outpost of European or American activities. This is not to say that the local computer music composers are isolationist or unaware of activity elsewhere.

Contemporary Australian culture is, perhaps more than many others, a complex mix of influences, and the work of the composers mentioned reflects this. Some works refer to Aboriginal themes (though there is a sensitive issue of appropriation here), specific Australian historical events, or aspects of the land itself. As noted above, Martin Wesley-Smith has written a number of pieces about the brutal Indonesian occupation of East Timor. The cultures of South-East Asia are having an increasing impact on Sydney (layered on top of the Southern and Eastern European and Middle Eastern influences, in turn layered on the Anglo-Celtic background culture). The Sydney University Music Department has long had an interest in Indonesian and Japanese music, as well as Aboriginal music, so many of the composers mentioned have been exposed to the soundworlds of these cultures; Jim Franklin's shakuhachi pieces have been mentioned above. Greg Schiemer has personal links with the Indian community in Sydney, and has worked with traditional Indian musicians. On the other hand, Gordon Monro's mathematically inspired pieces, or Ian Fredericks' *Requiem for a Planet* are not closely related to specific local cultural influences.

All this is to say that computer music composers in Sydney are a diverse bunch of people, pursuing a variety of agendas and reacting in different ways to the surrounding culture. By definition, however, academic computer music is practised by people with music degrees, who have been heavily influenced by the art music of the twentieth century: as noted above, the main division is between people who studied music and those who studied in art colleges or media departments.

8. WHAT NEXT?

In the current climate of severe funding cuts to Universities, survival in academia is a serious concern. In an environment where two electroacoustic people at the same institution count as a large group, it is hard to see growth occurring. There seem to be reasonable prospects of survival of electroacoustic music at the Sydney Conservatorium and at Western Sydney. Significant revival of the electroacoustic activity in the Sydney University Music Department seems unlikely at this time.

Clearly, computer music as such is no longer trendy: the hype has moved on to Web-based art and the like. As noted above, there is quite a lot of activity around art colleges and media departments. There would seem to be room for more computer music composers to provide teaching to students who do not intend to become musicians but who want to use sound or music in multimedia contexts. It is possible that a formal joining of forces may provide a way forward, though the place of music in integrated arts schools in Australia seems to be insecure, and in order to survive music needs to retain a recognisably separate identity.

Outside academia, Government support for individual artists via the Australia Council has been substantially cut, funding being directed to 'major organisations' such as Opera Australia. Additionally, the ABC (the local equivalent of the BBC), which has supported new music quite strongly, and ran a composition competition for computer music not long ago, is suffering severe cuts. Survival on commissions and residencies was never really possible for electroacoustic composers, and it certainly isn't now. A small number of people (Jon Drummond, Rik Rue, Greg White) do survive as freelancers, mixing commercial work and teaching with the occasional commission.

The most conspicuous activity without direct academic support is that of Australysis (mentioned above), though Roger Dean has a day job as a research scientist. Otherwise, it is hard to see a lot of 'computer art music' being composed away from the Universities.

I think this situation is likely to remain. However, the democratisation of the technology is leading to a democratisation of technique, and things like granular synthesis and phase vocoding are diffusing into the experimental music/underground music/multimedia art scene. So academic computer music is a fertilising influence on the wider musical scene. Maybe this is not too bad a state of affairs.

REFERENCES

Drummond, J. 1999. **Watt** website. http://www.jrcase.mq.edu.au/~jond/watt/index.html (last modified 7 December 1999).

Jenkins, G. 1988. *22 Australian Contemporary Composers: Greg Schiemer*. First published by NMA Publications in 1988, now available at http://www.netspace.net.au/~rlinz/NMA/22CAC/TOC.html

Lyons, A. 1998. *Dr Martin Wesley-Smith – Integrity in Australian Music Education*, http://www.vislab.usyd.edu.au/user/alyons/

Lyons, A. 2001. Ian Fredericks in interview: ideas of an Australian spatial synthesis and mixed media innovator. *Organised Sound* **6**(1): 63–7. A version was previously published in Chroma (newsletter of the Australasian Computer Music Association) No. 26–7 (combined issue), 9–13 March 2000.

https://doi.org/10.1017/S135577180100108X Published online by Cambridge University Press

Wesley-Smith, M. 1998. Flies in our Ointment. Address to the Australasian Computer Music Association Conference, Canberra, July 1998. *Mikropolyphonie* **4**(1997–8), http://farben.latrobe.edu.au/mikropol/volume4/smith-m/smith-ab.html

Ian Fredericks passed away on 15 March 2001.

The University of Sydney Department of Music is to be closed and all academic staff on continuing appointments are being transferred to the Conservatorium of Music.

https://doi.org/10.1017/S135577180100108X Published online by Cambridge University Press

https://doi.org/10.1017/S135577180100108X Published online by Cambridge University Press