Chroma

Newsletter of the Australian Computer Music Association, Inc.
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In This Issue...

News and Info

CD Latest

The second ACMA CD is nearly ready to enter production, with a total of nine original compositions from ACMA members now confirmed. The committe has felt that it is wise to hold off on the production of the disk until there is a sufficient number of compostions, to both reduce the cost to the composers who have submitted compositions, and also ensure that the project is worthy of ACMA's name and the effort of its members. If we can secure ten participating composers, the costs to each individual should be brought down to around $200.00. After ACMA's initial investment is recovered, the composers then take a share of the proceeds from CD sales. Anyone else who is interested in submitting a composition for inclusion on the CD is encouraged to still do so, as there remains enough playing time on the disk for another two or three pieces.

In addition to this CD release, the committee hopes to get the new *Bird Song* concept CD underway in the not too distant future, more about which will be heard shortly. The third project on the horizon for music publication is a lower cost and less formal cassette of members' works, which will not require investment on the part of the composers. It is hoped that this will provide a forum for those composers unable to meet the initial outlay of the CD publication.

Membership Renewals

March is the start of the new financial year for ACMA, and as such all memberships are now due for renewal. In the coming year ACMA intends to maintain bi-monthly publication of *Chroma* and launch the new journal of Australian computer music *Mikropolyphonie*, subscription to both of which is included in the annual membership fee. In addition to this, membership offers the opportunity to participate in our upcoming concert series, and submit pieces for CD and cassette release. A membership form is included at the back of this issue. Note that there has not been any increase in the membership fees this year, and that new members who joined after September 1st 1993 need not renew until next financial year.

ACMA Concert Series

ACMA will be hosting three concerts in Melbourne during

the second half of 1994. Although exact dates and venues are to be finalised, it is planned that concerts will be held in July, September and November. ACMA will consider providing financial support for members' initiatives in this area. If ACMA members have pieces or proposals for a performance in any of these three concerts, or ideas for concert formats or venues, please forward details to:

Lawrence Harvey
Email: harvey@music.unimelb.edu.au
3-13 Luscombe St
Brunswick East 3057

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The Competition in Music Composition through Algorithmic Models.

El Calleón del Ruido

This competition is announced by: The Centro de Investigacion Matematica (CIMAT), and the University of Guanajuato's School of Music and Laboratorio de Investigacion Musical (LIM)

Guidelines:

1) The competition is open to all composers, regardless of nationality or age.

2) An international jury will select 6 to 7 works to be performed during the festival El Calleón del Ruido: Composition, Ideas and Technology. A second jury will award three prizes at the conclusion of the festival. The first prize carries a cash award of $2500, as payment for a commissioned work to be performed at the festival the following year. The second and third prizes will consist of cash awards of $1000 and $500.

3) To be eligible to compete, the works must be composed with an algorithmic model. All work should be included with the submission.

4) All works must fall into one of the following categories:

a) Works for acoustic instruments, written fo orchestra or for any chamber ensemble that could be extracted from the standard orchestral formation (including piano).

b) Works which utilize electronics in combination with acoustic instruments, according to the previous guideline.

c) Works composed exclusively for an electronic medium.

5) The duration of the work must be from 6 to 15 minutes.

6) All submissions must be anonymous. A sealed envelope containing the name and address of the composer, program notes, and biography must accompany the work.

7) **Postmark deadline: August 31st, 1994.**

8) Entry fee: $20.

Please pay by international money order.

Please address all submissions to:

Festival Callejon del Ruido, Escuela de Musica, Universidad de Guanajuato, Paseo de la Presa 152, Guanajuato, Guanajuato, Mexico, C.P. 36000, Fax: (52-473) 25749

Important Notice

A printing error occured during the production of Chroma No. 15, February 1994, in which some pages were printed out of sequence. Although only one instance of this error has been reported, it is likely that other copies may have also been affected. The editorial committee apologises for any inconvenience this has caused.

Please contact us if you received a defective copy, and we will happily replace it without any cost to you.

Watt in Townsville

Gordon Munro
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The story so far...

The WATT group (directors Martin Wesley-Smith and Ian Fredericks) forms once a year to give electronic music concerts in Sydney. Last year the major work was *Dry Solace*, an audio-visual work based on slides George Gittoes took when he accompanied the Australian Army to Somalia. The work was performed in Sydney and in Canberra last October. Now *Dry Solace* is being taken to Townsville on 27th-30th March. This will give the Army personnel a chance to see some of George's work, and the shows will also be available to school children and anyone else who is interested.

George Gittoes took some 7000 slides in Somalia and also made numerous drawings. Jon Drummond selected slides for use in the bank of nine computer-controlled slide projectors owned by the Sydney Conservatorium. Jon did most of the visual programming and the coordination with the soundtrack (assisted by Damien Ricketson). The soundtrack contains contributions by Ian Fredericks, Julian Knowles, Adrian Luca, Gordon Monro and Rik Rue, and additionally Mark Eliott contributed live saxophone improvisations (and will be doing so in Townsville). Martin Wesley-Smith was the producer for the show.

George Gittoes said that the Army gave him a completely free hand when he was in Somalia. The Army also played no part in the creation of *Dry Solace* (in fact I don't think they knew about it). However some senior Army staff saw the show in Canberra, and they organized the funding to make the trip to Townsville possible. Now read on...

The WATT touring team (Jon Drummond, Mark Eliott, Kathy Caruana and Gordon Monro) gave 8 shows in Townsville (Army PR was very optimistic). We got about 800 people in toto, maybe more - the smallest crowd was 40, the largest 200+. Most were Army people on free tickets, expecting some sort of documentary. They seemed pleasantly surprised by what they got - a full-on artistic production. We set up at the Townsville Civic Theatre on Sunday. Great theatre, holds 1000+, fully equipped for lights, sound, stage productions. They even did Les Miserables there. Fortunately there is a curtain that closes off the back, converting the front part into a 382-seat theatre, and we used the smaller space for every show except the first.

Technical problems: the show runs on 9 slide projectors all controlled by an Apple IIe with a special card (Clearlight system). At lunch-time on Sunday the Apple IIe's keyboard started to lock up for no apparent reason. So we tried to get a spare. Ever tried to get an Apple IIe in Townsville on Sunday afternoon? Jon found one for sale in the local paper and started chasing that, and I rang up the local radio station (4TO) and asked them to broadcast an appeal, which they did. The appeal produced lots of Apple IIc's, which were no good because they can't accommodate the special card for the Clearlight. However Jon managed to hire the IIe in the paper for the duration. Our IIe actually got through all the shows - the keyboard would be OK if the machine was cold, so Jon had enough time to start the show before the keyboard froze. The only other technical problem was that one of the controller units gave up just before a show, but Jon replaced it and we only started 10 mins late.

Mark Eliott's sax playing went down well - seems there are sax buffs everywhere. One school party - year 11 and 12 Art students from a local girls' school. After the show Jon gave them a short spiel on the slides and image manipulations.

It turns out there is some tension between the Army and the town - the town likes the money the army brings, but they don't like the occasional brawls and drunkeness, so that what appeared to be an Army show was a turn-off for the general public. The few arty types that did show up seemed to like it.

George Gittoes was there Sun. and Mon. and introduced four of the shows in his inimitable fashion. George hustled around and got radio and TV publicity for the show. He had an exciting trip up - first his plane was delayed, then his luggage went to Mackay, then the hire car he was promised at the airport wasn't there, so he got a taxi, and it had an accident on the way into the town!

Overall, a good trip (even for George I think), and it does show (again) that people like this sort of stuff when they're exposed to it, even though they wouldn't normally go near it. I overheard the lady behind the bar at the theatre (who snuck in the back and saw most of the show) raving on about how it was a great experience and the music was fantastic - she didn't know I was listening. In the mornings we had whole platoons of troops come along, and they definitely got sucked in - they'd start off talking and joking, and go very quiet after a little while. In their case the images of places they'd been to had a lot to do with it.

So how does one reach this sort of audience normally?

Should Computer Music Composers/Musicians be Programmers?

Alistair Riddell
E-mail: amr@farben.latrobe.edu.au

Algorithmic composition will be a subject for discussion at this years Synaesthetica '94 conference in Canberra. This essay is intended to initiate discussion among ACMA members to ascertain the nature and extent to which the concept is employed.

Algorithmic composition is many things to many composers. It is relatively easy to define but the logic of the numerous implementations often makes it difficult to understand. The following essay takes a broad look at the subject by examining the role of programming in computer music.

As I muse over this question, I seem to hear a voice saying, "So do whatever it takes to get the music out" I enthusiastically respond, "Great, suits me" and imagine that similar internal voices speak to most computer music composers. Exactly, how each of us respond to this call is, of course, a personal matter.

To program or not to program depends on the individual and the moment. Some composers, who can program, may chose not to under certain circumstances. I believe having the option is to have a musical advantage. If I were to take the negative position (composers don't need to be programmers) then the discussion really ends here. So let me push my programming position a little further. I can easily appreciate a program as a composition, particularly when the results promote unique insights into the production of computer music. It's from this position that my thoughts emanate.

For the majority of contemporary musicians and composers there is little interest in developing programming skills because their musical objectives are not well represented in this context. I can appreciate that. Mainstream music technology, which predominantly caters to the commercial music world, has little interest in radical departures from traditional musical practices. They would ask, "What commercially successful song or film score was generated by an algorithm?" And implicitly, they are challenging new approaches to composition to conform to their criteria. Undeniably, a great deal of software is behind commercial hits but few people want that to be a significant point in the appreciation of the music.

Since the idea of programming is so new, its musical potential is difficult to demonstrate and difficult to promote. The correlation between program code and music requires careful study to appreciate (One might argue almost the same thing for traditional music notation). So suggesting that a creative perspective may be widened through the development of programming skills, in this context, falls largely on deaf ears.

For non-commercial music, the situation can be quite different. There is undoubtedly a benefit in understanding programming languages because, like any language, it stimulates alternative thought, and where art is concerned this is a desirable condition. It is in our nature with art music to seek, from the outset, unique expressive avenues, and language models have always been effective towards that end. Under certain conditions, switching to a foreign language, in conversation or text, often enhances a subject.; we may be encouraged to think about it a little deeper. And so it is with computer music. Using new and exotic computer languages has always been an important part of the computer music tradition, as can be observed in the many "Machine Tongues" articles that have appeared in the Computer Music Journal. Computer music is a musical context with access to a potentially vast array of languages. So it is, that composers have felt it necessary to make it known that their work was produced using a particular language. The composer is, to some extent, challenging the listener to consider the merits of her use of a language and its effectiveness in rendering her intentions. So what's new?

Any response to the title question clearly depends on defining "programming" and its relation to the creative activities that draw composers and musicians to use digital technology. What do we mean by composers and musicians who program? My understanding is, the writing of software that directly concerns the production of music. There are three categories of software development important to this end:

1. Tool development
2. Composition specification.
3. Composition systems.

All computer based composers and musicians use primary software tools. These include editors (sound and score), data processing and analysis applications, and I/O systems for recording or playing back sounds. Development in these areas is crucial to the evolution of the musical genre because it concerns the means of controlling the fundamental elements of the medium.

But writing development tools is frequently so time consuming that composers who may have that ability, become reluctant to do so without first weighing up the impact it may have on their compositional intentions. This issue lies at the heart of the music/programming question because programming takes considerable creative and intellectual energy that is often felt would be better directed towards music production. Rather than undertaking large time consuming software projects, I can imagine composers developing tools out of necessity, perhaps

nid-composition, in which case the tools are likely to be ailored to task at hand. Writing generalized composition tools s a long term commitment if they are to be considered robust nd useful. So within the category of tools we see that there is a :ub-category of general and user specific tools.

The concept of the "program as composition" is less easily nderstood because it is so subjective and likely to remain so. Virtually anyone who can write a program can come up with a vay of defining their compositions or compositional ideas in an lgorithmic format. The use of programming languages to create nusic introduces the idea that the individual can have their own :reative language and formulate their own music theory. This ieed not concern anyone else and is only a means to an end.

Composition languages can be divided into two categories:

1. Languages which are explicitly musical (graphic epresentations, traditional music concepts and terms)
2. General programming languages (no music pecific syntax)

n deciding which language group to use, composers have to ddress questions such as, "Is traditionally musical specification notes, sequences, chords, etc.) necessary?" "What is the value of defining private musical constructs?"

Other concerns about programming languages include: size, complexity, quality, hardware platform and maintenance. Programming languages can be big and complex, (eg. the GNU C or Lisp) while some musical languages are small and specific n functionality. The shortcomings in one language can be over come by using others, perhaps concurrently. Although, it is not hat common for us to switch spoken languages to better express ourselves in daily conversation, in literature, the practice has a vider acceptance. Why should composers be limited to one anguage? Especially, a computer language.

deally, what many composers wish to do is have their own private music language and execute it without unnecessary lelay. With conventional programming languages there is a slight delay in getting the program into an executable state. Each alteration or edit requires a compilation and linking stage vhich is not transparent. However, some languages don't equire these preliminary stages. They are just executed. These anguages are typically known as "script" or "interpreted" anguages (Lisp, perl, Tcl, expect). By "script", I mean a anguage that does not require an explicit compilation or linking tage (Although Lisp isn't really a script language to admirers, it loes run without compilation and linking). Trivial modifications o scripts can take on the character of a rehearsal with the script eing executed immediately after alteration.

Script languages can be made to work with existing composition systems (Cmusic, Cmix, Csound. Cmix actually has its own nternal script language). Programs written in the script anguage, output data that can be sent to these systems making it possible to generate complex interactions, perhaps not available vithin the system itself.

The problem with writing programs that are compositions (even before debugging) is audio signal management. How will the data be formatted so that it can be used by other music applications? This is the domain of the third category listed above. A composer may be happy to write a composition that is a program but not the mechanism to realize it. This is a specialized undertaking that requires particular knowledge of computer systems and the equipment that may control audio signals. There are a number of music systems around (Cmix, Cmusic, Csound, MusicKit) and the composer has to determine which best meets their compositional needs and their equipment.

I think there's an intuitive appeal in learning a language that can be used to produce new kinds of music. However, that this language might be conventional computer languages is less initially appealing because of the apparently unsympathetic view such languages have towards musical pursuits. Computer languages always seem remote in their ability to directly address musical issues. But on the other hand, why be limited to a language that speaks only about music? In the computer music context, what is a musical language should be at the discretion of the composer.

Of the three categories of musical programming, my concerns have been with the second, programs as compositions. Musical results have been encouraging enough to inspire me to continue. When people appreciate the music, it is far easier to inspire them to appreciate the role of a language in the production of this music. The concept, while still perhaps not understood in practice, gets accepted in theory and most importantly acquires a degree of familiarity.

To be sure, programming is an activity that may not appeal to many composers or musicians. It lacks the immediacy of the traditional performance experience and the symbolic abstraction of common practice music notation. Programming, as defined by the computer context, appears antithetical to the notion of musical composition. This is because we perceive programming as a scientific activity, separate from the emotional process we believe composing to be. It is only when we consider the implications of algorithmic composition can we begin to treat musical programming on something like an art basis. Here the composition is understood in terms of a performance specification. And like performance music,the result is a reflection of only one state of the specification. The possibility of performance-like nuancing of computer compositions, significantly enhances the creative process and leads to greater creative autonomy for the composer.

So when I discuss composition programming with other composers and musicians, I am frequently amazed by how varied their views are on the subject. No one seems to have quite the same take on it. I think that's a good position. It means that the function of programming is similar to that of any creative use of language. It has achieved a rich and evolving status which allows everyone to define their creative vision. may not always follow the reasoning or aesthetic direction of the composition program but we should be able to detect its effect in the music. If we like what we hear and think it worth imitating, then we can study the software more closely or direct our own language to approximate that musical position, and in doing so contribute to the evolution of programming in computer music composition.

Response to Should Computer Music Composers/Musicians be Programmers?

Steven Campbell
E-mail: scampbe2@metz.une.edu.au

The following is a reply to Alistair Riddell's article above, which was also posted to the oz-computer-music electronic mailing list. To subscribe, see instructions in the ACMA contact list box on page 10 of this issue.

An interesting 'seed' topic, and I look forward to reading the responsesthe article receives. -a couple of general ideas on the topic....

Computer music composers are increasingly being left little choice in this area, with the introduction of applications requiring a sound understanding of their inherent programming languages so that composers can take full advantage of what the packages have to offer.

Composers (such as myself) who lack a programming background are faced with steep learning curves for mastery over such applications, and it is here that programmers have an understandably distinct advantage over those not versed in programming; programmers are likely to take full advantage of an application within a markedly reduced time period. Consequently, programmers have more readily available the tools to produce works generated within new applications of their own devising, and are more readily able to take advantage of advances by fellow programmers.

In an historical context, innovative composers have demonstrated a mastery over the musical 'language' with which their works were forged, be it in a diatonic, serial or other style. Similarly, a mastery with computer programming languages would seemingly be required for the generation of contemporary computer music of an innovative nature. However, the development (and demise) of musical styles throughout history have not been through the efforts of individual composers but through the efforts of many working within the same style. Analogously, in the field of computer music, an application produced by one programmer is most effectivly employed by other composers (be they programmers or not) for an ongoing musical development of the application.

Presently, with the multitude of proven applications available to the computer music composer, and the endless possibilities of application combinations, innovative (or at least highly individual) musical works could be generated well into the future, without composers necessarily having programming expertise. Computer music composers who do have programming capabilities are thus advantaged in that they have the ability to produce new applications, and the background knowledge to take immediate advantage of the work of other programmers, whilst fellow composers, with or without programming backgrounds, are effective in the ongoing musical development of applications.

International Computer Music Association Mail Group

The following item, along with some other news items in this issue, come from the ICMA electronic mail group, which is moderated by:

Mary Simoni
University of Michigan
Ann Arbor, MI USA

Request to post:
icma@umich.edu

E-mail address changes:
msimoni@umich.edu

Search for Voice and Tape Pieces

Michael Matthews
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School of Music
University of Manitoba
65 Dafoe RoadWinnipeg
Manitoba R3T 2N2CANADA
(204) 783-5895 (home)
(204) 474-6015 (work)
(204) 275-0834 or 783-5895 (FAX)

I am looking for a piece for voice (sop, mezzo, or baritone) and tape, or 2-4 mixed voices and tape. Not longer than 15 minutes. This would be for a performance in the 1994/95 season of GroundSwell, Winnipeg's new music concert.

Responses to the Independent ACMA Studio Proposal

This mail is in part based on a request for suggestions at the recent ACMA meeting re: Proposal for independent ACMA studio. It is also a response to Graeme Gerrard's (grae@mura.its.unimelb.edu.au Thurs Mar 17) message responding to said request.

This first contribution is from Graeme Gerrard.

ACMA Public Studio

The following is based on a few assumptions/premises. They are:

1. That there actually ARE people around who don't have access to professional level equipment to make their music/do research/explore ideas etc., and that this number will increase as more graduates flood/dribble out of Universities and find themselves in a hostile and un-nurturing world where everything costs and, if you can't afford to pay for resources yourself, you can't have 'em.
2. That, with access to facilities, people could do work of high audio quality for various other media thingies (theatre, dance, etc), where they could perhaps earn money.
3. That electronic music outside of traditional teaching institutions could benefit from having a physical focus - one that provides a place for creation and exposure of work, without HAVING to hang it off other media.
4. That ACMA is best placed to initiate this (as opposed to ANAT, ACAT orother 'ATs).
5. That the thing is a 'Public' studio. By this I don't mean that any old individual can wander in off the street and play toys - there would have to be constraints, controls etc. for it to function and survive. No, I mean that what I am suggesting below (if I ever get there) is not my own personal wish list of equipment items, but things I think you would find in any working studio (simply because that's what people doing .(?). need, in order to do it).
6. That whatever hardware we are currently attached to may not be available or even desirable, when we get to go shopping.

What one needs to do. Remember I'm looking at COMMON things. People need to make (usually, currently, DAT & cassette) tapes of their work: for distribution, performances, conferences, radio broadcasts, grant applications and other competitions, CD mastering, and so on. So some dubbing facilities would be needed : DAT to DAT, DAT to cassette etc. (maybe even old reel-to-reel too?) What about a borrowable, portable DAT for location recording?

Then some digital editing (2 track?) To put all those pieces together for a CD master or all those little dance vignettes or whatever. So that means a computer, A to D, D to A, but why not digital transfers as well? - therefore cabling/patch bays etc.

People in the Computer Music ghetto want to use computers. We need to have computers, we need software, LAN, internet access?, we need storage space (disk probably, and terabytes). Computers may mean & include specialised DSP hardware, but maybe not in a couple of years.

We need monitoring.

Ideally, we need a situation where more than one person can work at a time. I don't know whether that means duplicating facilities or networking different facilities. Probably the latter, as diversity is a virtue unto itself.

We need security - against that world full of people without resources who will be glad to take ours.

I hadn't thought of the studio as a Job Creation Scheme until Warren mentioned this at the meeting, BUT that's not a bad thing. There are many good, technically competent people around who could use the work of looking after the studio and provide an opportunity for people to gain experience in running and maintaining a studio on a technical level. This is just a happy side effect.

Such a studio needn't provide EVERTHING. As Alistair has pointed out, most of us would prefer to work at home anyway. The studio could just provide facilities that people DON'T have access to at home. Of course, if you can do everything at home with your own resources, then that just means that you don't need to use the studio facilities, not that nobody would need to use them.

FINALLY, I personally think it would be good, for music, for electronic music, ACMA, Melbourne and Australia, to have some kind of performance space available so we can do concerts there, ideally adjacent to the studio room(s).
What else? Centrally located. St Kilda to Northcote, not Mt Waverley or Sunshine. A long lease, with options for renewal.

This reply came from Stephen Adam.

Basically Graeme, I agree with most of what you propose/suggest with a couple of minor (diminished?) differences which I will now outline. These are mostly of a technical nature. I have to point out that some of my ideas may be a little economically unrealistic. The idea here though is to suggest the relative ideals of what one would want and use in a functional studio. Lack of equipment and/or software is often the excuse for feeble compositions. It is just as often a very real problem in CM domains.

Then some digital editing (2 track?) To put all those pieces together for a CD master or all those little dance vignettes or whatever.

I would suggest that mixing facilities (digital) would be more significant than (2 track) editing (and implies more tracks). The more channels the better, however there are obvious economic realities. Related to this is the idea of what mixing is about in the digital domain. Obviously the real-time graphic

waveform view (Protools paradigm) has a great deal to offer. It functions not only as an elaborate mixing/editing environment but is also a useful compositional tool. The point I'm getting to is that new options for digital mixing and editing are broadening and some may be cost effective...even some homegrown non-realtime mixing stuff could be useful here. (eg if the PowerPC can playback nine channels of 44k audio then some system could be devised to make use of this without the need for something as elegantly expensive as Protools (circa 13k for basic 4 channels).

So that means a computer, A to D, D to A, but why not digital transfers as well? - therefore cabling/patch bays etc.

Definitely...the more processes that can be accommodated in domaine digitale the better. See below for more on this...
We need monitoring.

High quality and configurable Quadraphonic (ie dual stereo etc.). Ideally, we need a situation where more than one person can work at a time. I don't know whether that means duplicating facilities or networking different facilities. Probably the latter, as diversity is a virtue unto itself. Probably both to some degree...see below.

The multifunctionstudiopolis © S. Adam 1994 An ideal setup would draw on diverse influences in the planning of a flexible and functional creative studio environment. The centralised storage facilities in large scale computing environments (and increasingly in broadcast) could be a useful model. This would imply that data is accessible by all nodes or work areas of the facility.Of course one would expect relatively reliable storage in such an arrangement.

What are the workstations?

Well, there is much room for dissent here but I would propose the following.

1. The basic assumption of much of this is that A. all facilities can operate on an agreed minimum no. of channels (say 4). and B. where feasible, all signals are represented as data (digital).

2. Main control room for HQ monitoring and multitrack/mixing facilities. Some basic recording stuff (mikes etc) tied to a performance space/studio. The performance space/studio, as Graeme suggests, could be a valuable addition to Melbourne's CM cultural profile. The performance space doubles as a studio for recording (even voice stuff etc with some screens)

3. A workstation for real-time signal processing...ala Syter, NextMax, or GRMtools..lots of custom stuff and commercial hardware. This should have at least 4 feeds from studio/performance space and links to main storage.

4. A MIDI workstation, for sequencing, algorithmics and commercial hardware. Samplers if any, should have access to central storage. (This could also double as a non-real time signal processing workstation) I'm happy about forgetting this one entirely but...

Centrally located. St Kilda to Northcote, not Mt Waverley or Sunshine. I guess that means not St. Albans too??

From Warren Burt:

Dear Steve:

I've now talked to Ernie Althoff, Chris Mann and Rainer Linz about a public studio and here's what they have to say:

Rainer: It doesn't make sense to have a studio and attached performance space like we're thinking about unless massive funding can be gotten. To try to do a project like this on the cheap would only be to invite disaster.

Ernie: Would love to work with digital mixing and editing. He could really see possibilties in multitrack combining of his sound sources.

Chris:

1) It should have a liason with a radio station.

2) It should have lots of crappy ordinary stuff that high tech types usually forget about- like cassette duplication facilities, etc.

3) It should have a liason/access to someone who can do CD mastering. (It doesn't need to have a CD mastering machine itself, just have access to someone who does Unless, of course, the price of CD mastering machines plummets)

4) It should have an inventory of different microphones suitable for different processes and sound sources.

5) It should be near public transport. Just talking off the top of his head, he suggests Linden Gallery in St. Kilda as a place where it might be located, and 3PBS as the radio station most likely to be interested in a liason with such a studio.

As for me. I agree with all of Chris's suggestions. As for facilities, what I'd like to play with is high end sound transformation stuff and real time additive synthesis stuff. Probably by the time such a studio comes into existence, I'll be able to do realtime additive synth on my home computer, so phase vocoding and other types of transformation would be one thing I'd like from a wish list studio. Otherwise, basically, I'd like a place where the new music community could feel that this was a center that existed for them, and would want to work there. My desires, are, I think, more sociological than technological.

Response from Roger Alsop:

The problems in creating a service such as the Independent Electroacoustic Music Studio are many so I'll look at just a few.

First, who gets to use it. Will the impoverished boy from Brooklyn (the suburb in South West Melbourne) who wants to produce a hiphop demo be as welcome as the established electroacoustic musician from Carlton who is on the net? The problem here is not of elitism but of information, the boy from Brooklyn must be as aware that such a facility is available as the woman from Carlton. It is up to the providers of the service to ensure that this is done. A service that is open provides great

potential for exchange of ideas and techniques and for education, thus expanding the electroacoustic ghetto.

Second, who pays for it. Should the service be free, if not then do musicians whose income is greater than the dole contribute more than those less fortunate.The costs of purchasing equipment of the type required is very high and what ever equipment is purchased quickly becomes old hat. Fortunately art relies on creativity not tools. The ongoing costs of maintaining and insuring the equipment and of renting the space are also high. Convincing a funding body to spend that kind of money would be a master stroke and be fitting of immediate induction into the ACMA hall of the REALLY VERY FAMOUS. Another option is electroacoustic musicians donating or lending equipment and/or space, eg. a room in their house or some rarely used equipment. This would be very cost effective and give the caretaker(s), ie those providing the space/equipment, use of the equipment during down time in return for maintaining it and looking after bookings. This approach is far from optimum but is a beginning and, if it is seen to work, funding bodies may look on larger enterprises favourably when grants are applied for.

A performance space is now available at the Hawthorn Lower Town Hall. The room sits 60 people comfortably and comes with a small PA, a number of mics. and a small advertising budget. It is also **FREE**. The arts officer at Hawthorn City Council has offered me this space specifically for more esoteric performances. I will be presenting Robert Ashley's *Perfect Lives* and videos and music from Los Angeles and New York later this year. If anyone wants to use this space I can be contacted on (03) 489 1635 most any time or at ralsop@klang.latrobe.edu.au.

Stanford University CCRMA Summer Workshops 1994

Introduction to Yamaha VL Synthesizers and Algorithmic Composition in Common LISP

June 27 - July 8, 1994; Fee: $800.
Two weeks hands-on instruction. Limited to 20 participants. Instructors: Heinrich Taube, Alex Igoudin, Fernando Lopez Lezcano, Chris Chafe. This course will cover basic principles and techniques of algorithmic composition. Sound synthesis as used in course examples will include MIDI, the (realtime) Music Kit and (non-realtime) Common Lisp Music and Common Music Notation. Yamaha synthesizers used in the course will include the VL-1 and SY-77. The course will be taught on both Unix and Mac workstations using Lisp and Common Music / Stella environment. No prior experience with the Lisp programming language is assumed.

Advanced Projects in Algorithmic Composition

July 11 - July 22, 1994; Fee: $800.
Topics are continued from the first course but emphasis is placed on developing programming skills while working on individual projects of the student's own choosing. (Students may take the full 4 week course at a reduced tuition rate of $1400.)

Intensive Music/Audio Digital Signal Processing and Spectral Modeling Synthesis (SMS)

July 5 - July 15 (or July 23), 1994; Fee: $1200.
Two weeks instruction. Limited to 15 participants. One week optional project or study. Instructors: Xavier Serra, Julius O. Smith, Perry R. Cook.

This course will cover analysis and synthesis of music signals based on physical models and spectral models. This year only, there will be a special emphasis on spectral models due to the unique availability of Dr. Xavier Serra. The course will be organized into morning lectures covering theoretical aspects of the models, and afternoon seminars for presenting and discussing specific implementations and applications of the models *.The morning lectures will present Fourier theory, spectrum analysis, STFT, the phase vocoder, digital waveguides, digital filter theory, pitch detection, and linear predictive coding (LPC). In the afternoon seminars, several implementations of physical models and programs based on SMS will be presented. For specific projects based on SMS, there will be an option to stay a week longer. Familiarity with engineering, mathematics and physics is required.

Music Printing with Small Computers using SCORE

July 11 - July 22, 1994; Fee: $700.
Two weeks instruction. Limited to 8 participants.
Instructor: Leland Smith

This course will cover the details of the use of the SCORE software program for the creation of publication-quality music typography on PC compatible computers. Emphasis will be placed on the production of individual participant's projects.

ADDITIONAL INFORMATION
Housing costs are not included in the course fee. Campus housing is available through the Stanford University Conference Office. Participants can bring their own computer. No academic credit is offered for participation in the workshops. All source code and documents from the workshop are free to take.

FOR APPLICATIONS CONTACT:
CCRMA Summer Workshops
Department of Music
Stanford University
Stanford, CA 94305-8180, USA.
Phone: (415) 723-4971.
Fax: (415) 723-8468
E-mail: aledin@ccrma.Stanford.EDU

Call for Tapes / Scores:

The Florida International University Electronic Music Studio seeks compositions for inclusion in its *Electric Palms Concert Series*. Composers may submit electric works for tape, solo performer and tape, live electronics, or multi-media works for programming consideration. Acceptable formats include DAT, CD, VHS, 1/4" reel-to-reel, and high quality cassette.

Although the call for tapes/scores is ongoing, material must be postmarked by May 1, 1994 to be considered for the 1994-95 *Electric Palms Concert Series*. Material submitted without a self-addressed, stamped envelope will be deposited in the FIU Electronic Music Studio library. As funding for performers is limited, more works without performers will be programmed. Please send all materials to: Jon Christopher Nelson, Director, FIU Electronic Music Studio, Florida International University Park Campus, Miami, FL 33199.

Hong Kong Computer Music Concert

Martin Wesley-Smith
Division of Composition
Conservatorium of Music
University of Sydney

On April 11 1994, the Music Department at the University of Hong Kong presented a concert of computer music by Hong Kong composers. Two of the pieces were by Joshua Chan, who studied composition at the Sydney Conservatorium of Music during the 80s: *Unknown Journey*, which was played at the 1993 International Computer Music Conference in Tokyo and included on the ICMC CD, and *Innerutterance*, for clarinet & tape (1991), played yesterday by Martin Choy. Joshua, who has been teaching at HKU, is currently finishing his PhD in Composition at HKU.

American composer Andrew Horner, who is lecturing in computer science at the Hong Kong University of Science & Technology, contributed the tape piece *Phenotypes*, while the Hong Kong Academy for the Performing Arts was represented by Tsang Yiu Kwan's new tape piece *Humanism*. Other pieces on the program were by HKU students (Ho Sun Ning Sunning, Lee Suk Han Mariana, Mark Loh, Luk Wai Yip & Tang Ki). Plus a piece by me (I'm here for six months, making me a very temporary HK composer).

ACMA Contact List

To contact the committee, any of the persons mentioned in this issue or for any other information, Electronic mail can be sent to :

ralsop@klang.latrobe.edu.au or...
stainsby@klang.latrobe.edu.au

or fax:

(03) 479 1700 (c/- music dept. La Trobe Univ)

or write to:

ACMA, Inc.
PO Box 186
Post Office Agency
La Trobe University VIC 3083

oz-computer-music is an electronic mail list serving the Australian computer music community. To subscribe to oz-computer-music, send the following E-mail message to:

listserv@latrobe.edu.au
subscribe oz-computer-music

1994 ACMA Committee

President: Alistair Riddell
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E-mail: Harvey@music.unimelb.edu.au

Treasurer: Jane Walker
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AnthonyHood
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ph: (02) 882 8343 (W)

16th International Competition of Electroacoustic, Analogic and Digital Music.

RULES

1) The "Russolo-Pratella" Foundation of Varese to honour the memory of the futurist composer Luigi Russolo (1885 - 1947) in the 80th anniversary of his Manifesto "The art of noises", organises with the honorary pesidency of Pierre Schaeffer, the 16th edition of the International Competition of electroacoustic, analogic and digital music. The competition is open to Ialian and foreign composers up to the age of 35.

2) Each competitor can take part with one or more compositions indicating exactly the chosen catagory:
- a) analogic or digital electroacoustic music
- b) electroacoustic music with instruments or voice
- c) electroacoustic music for the radio
- d) electroacoustic music for dance

3) Each competitor must send his written application to the
"Russolo-Pratella" Foundation,
Via Bagaini 6,
21100 Varese Italy,
before 31 July 1994. The application must be accompanied by a personal photo, a birth certificate and a short artistic curriculum.

4) The composition, on 1/4 inch reel (19/38 ips) or DAT, with a maximum length of 15 minutes, must have a short description of the work and, if it is possible, the score. They must arrive to the Foundation Secretary, free of cost, before August 31 1994.

5) Each cassette-cover must indicate: the title of the composition, the tape speed, the time length and any other information related to the listening.

6) This material will not be returned and will become part of the archive of the "Russolo-Pratella' Foundation. Moreover the Foundation reserve it self the right to use this material for the public auditions even outside its office residence.

7) The Foundation does not think that it is right to provide the Competition with a premium but to publish a CD. In this CD will be inserted the first piece classed in each category and eventually other pieces pointed out from the Jury.
- a) There will be a certificate of specialization for the first 3 classificated of each category.
- b) Each competitor with his piece inserted in the CD will have 20 copies free, carriage forward. The other competitors with the certificate of specialization will have 5 copies free.
- c) The realized CD will be successively sent to Institutes, Research Centers, Radio, and specialized magazines.
- d) The G.M.E.M. of Marsiglia will give among the competitors 1 scholarship for a month to work in this glamorous Research Center.

8) The International Jury, presided by G. Franco Maffina of the "Russolo-Pratella" Foundation is composed of:
CHRISTIAN CALON (Canada) - composer and musical director G.M.E.M. of Marsiglia
ROBERT DIKMANN (Switzerland) - composer and musical assistant R.T.S.I. of Lugano
TZEVETAN DOBREV (Bulgaria) - composer
JURAJ DURIS (Slovakia) - composer and director CECM of Bratislava
CARLO FERRARIO (Italia) - composer
IGOR LINZT-MAUES (Brazil) - composer and coordinator institut fur Elektroakustik Musik of Wien
CARLO PESSINA (Italia) - composer and director Liceum Musicale of Vares
ROSSANA MAGGIA (Italia) - coordinator and P.R. "Russolo-Pratella" Foundation

9) The Jury sittings, the ceremony of prize-giving and the performance of the selected works will take place at the "Civico Liceo Musicale" in Varese. The Jury resoloutions will be immediatly announced to the competitors and to the means of communications.

10) For further informations write or phone to
"Russolo-Pratella" Foundation
Via Bagaini
6 - 21100 Varese (Italy)
Tel. (0332) 237 245

Chroma is edited by Roger Alsop, Ross Bencina and Thomas Stainsby.

Chroma is published bi-monthly and back issues are available at $2.50 each, with a compilation of issues 1-9 available for $18.00.

Acknowledgements:
Thanks to La Trobe University Music Department & Richard Lewis for the use of their computers in compiling this news letter.

The Music & Technology Environment of the International Bartok Seminar June 25 - July 14, 1994. SZMOBATHELY, Hungary

The Bartok Seminar and the Hungarian Computer Music Foundation have created the Music & Technology Environment as a development and an extension of the computer music course started by Prof. Stroppa in 1988.
The environment will propose a whole range of activities distributed over three years, from 1994 to 1996. Centered around a featured composer, renewed each year, it will also offer a theoretical course on some fundamental issues in music and technology (Prof. Stroppa) and a workshop (Prof. Szigetvari, co-ordinator) providing hands-on experience with the most advanced technology for music today available. A number of punctual activities (namely lectures by internationally-renowned performers, composers and scientists and concerts as part the Bartok festival) will complete the basic framework.

The STEIM Foundation from Amsterdam will be the special guest of the Music & Technology Environment. It's composers will present a concert with a demonstration and will take part in the activities of the Computer Music Workshop. The 1994 edition will also host the first "New Generation" competition, whose principal aim is to discover new talents in the field of music using technology.

The environment will provide lectures and demonstration not only for composers, but also for performers, musicologists and journalists willing to share their ideas, culture and experience within this interdisciplinary context.

Composition course: Prof. Jonathan Harvey
July 4 -14

Guest ensemble: Intermodulacio Ensemble
Tihanyi Laszlo, artistic director; Nugy Zsolt, conductor.
The available instruments are: flute, oboe, clarinet/bas-clarinet, bassoon, horn, trumpet, trombone, harp, piano, 2 percussions, string quintet.
Active participants who wish to work with the ensemble must send one copy of the score of their piece to the Secretariat of the Bartok Festival **before the 31st of May 1994.**

Computer Music Course: Prof. Marco Stroppa
July 2 - 14
The year's subject:
Composition and interpretation; a Critique of interaction.

Computer Music Workshop: Prof. Andrea Szigetvari
June 25 - July 25
Guest lecturers and assistants:
George Hajdu (CNMAT, Berkeley, USA)
Johannes Kretz (Vienna)

Guest performers:
Mari Kimura, violin and Zeta-violin (USA)
Györhy Lakatos, bassoon (Hungary)

Guest ensemble:
Guest ensemble: Intermodulacio Ensemble
Tihanyi Laszlo, artistic director; Nugy Zsolt, conductor.

For more information:
Interart Festivalcenter
1366 Budapest
P.O. Box 80
tel.: +36-1-11794838
fax.: +36-1-1179910

ACMA Concert Series Concert No.1 Proposal - Hemisphere Swap.

To kick off the ACMA concerts this year, the commmittee is proposing that the first concert (July) be centred around a musical swap. This would take place between ACMA members and Columbia University in New York.

From preliminary negotiations, music by Australian computer music composers would be presented at a concert in New York in late May. In exchange, works from composers there would get presented in Melbourne in July. At this time, we are seeking suitable compositions to be put on a write-once CD which will be sent to the US. If you are interested or have a composition please contact us or send a DAT master copy.

PO Box 186
Post Office Agency
La Trobe University. Vic. 3083.

The committee feels that this idea could lead to a series of swap concerts throughout the world. The importantance of this type of musical presentation is its bi-lateral character. Rather than sending tapes at random to centres around the world, ACMA negotiates a performance scenario which is structured and mutually benificial. Apart from the chance to get Australian computer music heard overseas, Australians get to hear what is happening from sources other than the traditional mainstream computer music centres. In order to get on the May program, we would need to have the compositions by the first week of May.

CALL FOR PAPERS AND MUSIC
1st BRAZILIAN SYMPOSIUM ON COMPUTER MUSIC
August 2-4, 1994
Caxambu, Minas Gerais, Brazil.

The 1st Brazilian Symposium on Computer Music will be held at Caxambu during the 1994 Annual Congress of the Brazilian Computer Society (SBC). Caxambu is a resort town 300 km from Rio, Sao Paulo and Belo Horizonte. The Symposium has been organised by NUCOM (Brazilian Computer Music Society), in collaboration with the SBC and the School of Music of the Federal University of Minas Gerais.

The objective of the symposium is to discuss technical aspects of the specification, design, implementation, and evaluation of computer systems for music, as well as to present ongoing research in the field. The symposium is aimed primarily at stimulating the exchange of ideas among computer scientists and musicians, but we also welcome interested researchers from other areas such as electronics, linguistics, psychology, physics, and education.

Main areas of interest:

Systems and languages for composition,
Systems and languages for sound synthesis.
Signal processing and sound transformation.
Automated music analysis.
Artificial intelligence and music.
User interface and instrument design.
Notation systems.
Psychoacoustics and cognitive models
Other topics, not covered above, will be considered by the program comittee.

Program Comittee:

Aluizio Arcela, University of Brasilia, Brazil.
Eduardo Miranda, University of Edinburgh, UK.
Geber Ramalho, University of Paris 6, France.
Jamary Oliveira, Federal Univesity of Bahia, Brazil.
Wilson de Padua de Paula Filho, Federal University of Minas Gerais, Brazil.

Concert Comittee:

Conrado Silva, University of Brasilia, Brazil.

Francisco Kroepfl, Laboratorio de Investigacion e Produccion Musicale, Argentina.

Mauricio Loureiro, Federal University of Minas Gerais, Brazil.

Robert Willey, Center for Research in Computing and the Arts, University of California San Diego, USA

Symposium Organizing Comittee:

Mauricio Loureiro (Symposium chair),
Federal University of Minas Gerais, Brazil.
E-mail:mauricio@dcc.ufmg.br

Geber Ramalho (NUCOM coordinator),
University of Paris 6, France.
E-mail: ramalho@laforia.ibp.fr.

Nivio Ziviani (SBC'94 Congress Chair)
Federal University of Minas Gerais, Brazil.
E-mail: nivio@dcc.ufmg.br

Program Schedule (subject to change)

Tuesday 02/08:
- 14:00 - 16:00, Opening and Special talks 1,
- 16:00 - 18:00, Paper Section 1
- 20:00 - 21:30, Concert 1

Wednesday 03/08:
- 09:00 - 10:30, Special talks 2
- 10:30 - 12:00, Round table discussion 1: "Computer Music in Brazil"
- 14:00 - 15:30, Special talks 3
- 15:30 - 18:00, Paper section 2
- 20:00 - 21:00, Concert 2

Thursday 04/08:
- 09:00 - 10:30, Special talks 4
- 09:00 - 12:00, Round table discussion 2: "Perspectives for Education in Computer Music in Brazilian Universities"
- 14:00 - 17:30, Paper section 3
- 20:00 - 21:00, Concert 3

Paper Submissions:

Abstract submissions should not exceed 400 words. They can be sent by surface or electronic mail (ASCII format). Papers can be submitted and presented in Portuguese or English.

Music Submissions:

The symposium will include three concerts devoted to computer music. Works may involve, but are not limited to, real time interaction, tape music with or without performers, and multimedia. Composers are responsible for supplying any special equipment needed for the performance. The following equipment will be available: Computers: Sun station, 486 with DAC, Mac Quadra 700 Audio equipment: 2 channels, PA, Mixer, DAT, CD

The Grupo de Musica Contemporanea of the Federal University of Minas Gerais (Belo Horizonte) will be inviting artists for the festival and are available as resources to perform works. The ensemble's instrumentation consists of: flute, clarinet, saxophone, bassoon, trombone, string bass, violin, and conductor.

Pieces for the three concerts will be selected by a committee composed of: Conrado Silva, Francisco Kroepfl, Mauricio Loureiro, and Robert Willey.

Entries should include a cassette or DAT tape and score, if available. Indicate the work's duration and describe the technical requirements required to produce it. Information can be sent in Portuguese, Spanish, or English.

Submissions must be received in San Diego by April 25, 1994.

Send submissions to:

Robert Willey
Center for Research in Computing & theArts
0037 University of California San Diego
9500 Gilman Drive
La Jolla, CA 92093- 0037 USA

Submissions from Brazil send to:

Conrado Silva UnB - Colina
Bloco F Apto. 05
70910-900 Brasilia - DF Brasil

For more information contact:

Mauricio Loureiro (symposium chair)
E-mail: mauricio@dcc.ufmg.br
Federal University of Minas Gerais

or:

Robert Willey
E-mail: bobw@sdcarl.ucsd.edu fax: {USA}
(619) 534-7944

If you wish your materials returned include a self-addressed stamped envelope and/or International Reply Coupons for return from the United States.

Deadlines and important dates

April 25, 1994 - Submission of abstracts and compositions
May 25, 1994 - Notification of acceptance
June 15, 1994 - Submission of the final paper

Contact address for submissions and further information

I Simposio Brasileiro de Computacao e Musica
CENEX - Escola de Musica
Universidade Federal de Minas Gerais
Av. Afonso Pena 1534
30130-005 Belo Horizonte
MG Brazil
Phone: 55-31-222 2251 (voice)
55-31-273 5429 (fax)
E-mail: mauricio@dcc.ufmg.br

Call for Participation
Synaesthetica '94

A Symposium on Computer Animation and Computer Music
1-3 July 1994
The Australian Centre for the Arts and Technology (ACAT)
Australian National University
Canberra, Australia.

Presented in Association with the Australian Computer Music Association, Incorporated.

IMPORTANT DATES

* All initial submissions:
  29 April 1994 including Papers,(VHS)Video (PAL), audio (cassette)
* Notification of Acceptances
  23 May 1994
  (follows Review Panels' decisions)
* Master copies due 3 June 1994
  o Papers: Camera ready A4 double spaced single sided
  o Audio Tapes: DAT (48KHz),
  o Video: S-VHS or 3/4" Umatic (High Band SP) PAL
* Discount registration ends 10 June 1994

NOTE: Wherever possible, please address all your questions and responses to Julie Fraser via email to:
cat691@acat.anu.edu.au

PURPOSE

The symposium will bring together researchers, developers and practitioners involved in the theory, practice, and analysis of computer-based animation and music composition as well as realtime performance systems. This three day program is designed to encourage the interaction between researchers and the interchange of work and ideas in the areas of computer music and computer animation.

The symposium will provide a mix of innovative technical sessions and cultural events to promote the understanding and development of both computer music and computer animation and will provide a forum for exploring the technical and aesthetic similarities and difference in these two fields.

Transactions of the Symposium will be published. They will contain the selected papers, descriptions of performances, etc.

SCOPE

Original papers, live performance works, works for screenings and poster presentations are sought on a wide range of topics.

The fields are evolving, hence the scope of the Symposium is broad. We encourage and invite submissions in the form of original papers, state-of the-art reports, live performance works and works on video or audio tapes in every area of the field, including (in no particular order):

- Behavioural Animation
- Special effects
- Animation languages/systems
- Realtime Animation
- Sound and Speech synthesis and synchronization
- Physical Dynamics
- Sonification
- Software and hardware architectures for sound & image composition.
- Special hardware for image and sound synthesis or processing
- Composition and performance
- Distributed Systems and Parallel Programming
- Spatial Audio
- Collaboration environments & networking and communication
- Media integration and synchronization
- Programming paradigms and environments
- User interfaces
- Animated visualisation
- Robotics and animation (virtual robotics)
- Motion control
- Modeling and Rendering
- Proceedural animation
- Spatial and temporal antialiasing
- Synthetic actors
- Virtual reality

Where applicable, prototype demonstrations or slide, tape etc presentations are encouraged to supplement the papers.

LANGUAGE

The working language of the conference will be English.

PAPERS

Authors are encouraged to submit high-quality papers which should be at most 6000 words or 10 pages. Submissions should consist of 3 copies of the paper and a cover letter indicating the primary author's name, affiliation, address, phone and fax numbers and email address. The title page should include an abstract (less than 200 words) and up to 5 keywords.

Please see table at the beginning of this announcement for deadlines.

CULTURAL EVENTS

- An exhibition: Contours of the Mind: A Celebration of Fractals,Feedback and Chaos,
- Public Performances
- Audio-visual display/ listening room
- Installations

OPEN FORUM

Synasethetica '94 delegates will be asked to submit in no more than 10 lines a question or statement outlining an issue pertaining to their field of endeavour that they consider currently important. An open forum where questions and discussions relating to these ideas will be scheduled.

FEES (Australian Dollars)

- Registration fee $120
- Early registration fee $100
- Student & Unemployed $90
- Early registration fee $75

For those intending to submit a paper, poster, or recording the notification should include the format, title and a brief outline (100 words) of the proposed submission.

For more information, notification of intention to participate etc, please contact:

SYNAESTHETICA '94
Attention: Julie Fraser
Australian Centre for the Arts and Technology
GPO Box 804 Canberra,
ACT 2601, Australia
E-mail: cat691@anu.edu.au

ORGANISING COMMITTEE

David Worrall, Head
Stuart Ramsden, Lecturer in Computer Animation
Tim Kreger, Lecturer in Computer Music
Julie Fraser, Executive Officer

Australian Centre for the Arts & Technology (ACAT)
Institute of the Arts, Australian National University
email: cat691@anu.edu.au

ZKM Computer Music Workshops 1994
Institute for Music and Acoustics Centre for Art and Mediatechnology, Karlsruhe Germany

1) Algorithmic Composition, September 25-October 5, 1994.

Ten day workshop focuses on the computer as a compositional too lindependent from its role in digital synthesis. The course provides an introduction to the basic principles and procedures in algorithmic composition and covers such topics as pattern generation, composing with random processes, scheduling, and algorithmic score editing. The workshop is open to composers with previous experience in computer assisted composition or digital synthesis. Familiarity with at least one computer language (C, Pascal, Lisp, Smalltalk, etc) is desired but not required. The workshop will be taught using Common Music, which provides a hardware independent environment supporting a number of synthesis packages such as the Music Kit, Common Lisp Music, CSound, and MIDI.

To remain as general as possible, concepts will be introduced and demonstrated using MIDI, but composers who wish to work with one or more of the other synthesis possibilities during the workshop are free to do so. ZKM will provide a mixture of NeXT machines and Mackintoshes; composers may bring their own machine as well. Source code, documentation, and directions on how to install the system at remote sites will be free to the participants at the end of the workshop.The course will be lead by Rick Taube. He developed Common Music andStella, is a composer and works as a software specialist at theInstitute. Tobias Kunze, a Berlin composer, will assist and support the participants. The workshop is limited to ten participants. Classes will be taught in English and German; the handbooks are in English. The registration fee for the course is 500 DM, for students 250 DM.

2) Introduction to Digital Sound Synthesis, October 6-9, 1994.

This workshop provides an introduction to many of the synthesis and sound editing techniques commonly in use today, and covers such topics as frequency modulation, additive and subtractive synthesis, linear transformations (sampling and frequency shifting) and non-linear transformations (phase vocoding and physical modelling).

Participants will be able to augment their theoretical knowledge with some "hands on" experimentation using the various synthesis models. The workshop is open to composers with previous experience in electro-acoustic music and in digital synthesis.

Familiarity with at least one computer language (C, MAX etc) is desired but not required. The workshop will be taught using MAX and the ISPW (IRCAM Signal Processing Workstation) running on NeXT computers. But the aim of theworkshop is to provide an introduction to general technical and acoustic principals rather than an introduction to a machine specific environment. The course will be lead by Pierre Dutilleux, who received his PhDin signal processing and acoustics and is currently the Research and Development Ingenieur at the Institute for Music and Acoustics. His main interest is designing digital (software) instruments for composers. The workshop is limited to ten participants, and may be taken together with the workshop on Algorithmic Composition. Classes will be taught in German and English; the handbooks are in English.The registration fee for the course is 250 DM, for students 125 DM.

For further information and registration contact:

Zentrum fuer Kunst und Medientechnologie
Institut fuer Musik und Akustik
E-Mail: music@ zkm.deRitterstr
42 76137 Karlsruhe Germany
Tel 0721/ 9340-300
Fax 0721/ 9340-39