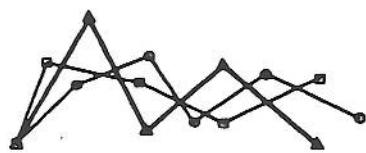


# *Chroma*



*Newsletter of the Australian Computer Music Association, Inc.*  
PO Box 186 Post Office Agency La Trobe University VIC 3083

Number 18  
October '94

ISSN 1034-8271

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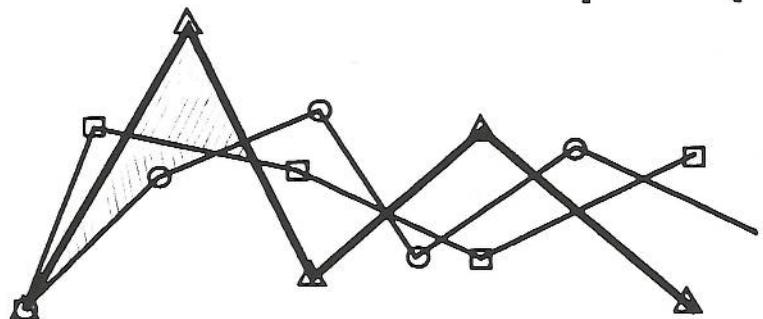
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*Chroma* is edited by Roger Alsop,  
Ross Bencina and Thomas Stainsby.

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*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.

### Acknowledgments:

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

*The views expressed within are not necessarily those of the Editors or of ACMA, Inc.*

## CALL FOR PIECES

# ACOUSTIC PIANO & TECHNOLOGY

We, Gabriella Smart (piano) and Roger Alsop (technology) are planning a tour of Hobart, Melbourne, Adelaide, Sydney and possibly Brisbane next year.

The idea grew from concerts of Erik Satie's *Vexations*, performed in Hobart, and Luigi Nono's ....sofferte onde serene ..., performed in Melbourne this year. *Vexations* was performed in a theatrical setting and we want to keep this as part of the concert series, however this need not unduly concern the composers.

We made requests for compositions via the internet and so far have received about 25 expressions of interest from composers in the US, UK, Israel, Belgium and Canada. So far we have four commitments to writing pieces and many submissions of existing pieces. It would be good to have Australian music well represented and we will aim towards that in our programming.

The technology available is: MAX and sequencing software, a Classic II, Proteus 1, Quadraverb, Boss 16 channel mixer, Korg OSR/W, a Korg SDD 2000, a DAT player and various microphones. You can of course add to this if necessary for your piece. PA systems are organized according to where we perform.

If any one is interested in composing for us or has a piece they would like to submit please contact:

Roger Alsop  
14 Perry St, Fairfield, VIC 3078  
phone: (03) 489 1635  
email: ralsop@klang.latrobe.edu.au

## ACMA Annual General Meeting

4.00 pm  
Saturday November 19th

Conservatorium of Music  
University of Melbourne  
Royal Parade  
Carlton, Victoria

*All Members are strongly encouraged to attend.*

See agenda on page 26 and proxy and nomination forms at the back of this issue

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In conversation with Steve Adam, on

# Chromophony, electroacoustic composition and more.

Lawrence Harvey

*The following conversation was held at the University of Melbourne Electroacoustic Music Studio on Friday 12 August, 1994. We intended to discuss a recent work of Steve's, Chromophony. Although this occurred, the conversation inevitably traversed many related issues. Chromophony is a work for tape, based around various transformations of female voices. It has been presented at Astra and Linden concerts in Melbourne and the Synaesthetica Conference in Canberra in July of 1994*

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*Could you explain the approach to recording the source material for the piece, and any particular approaches you took in the studio? Did you start shaping any particular gestures at these sessions?*

I had some idea of the gestural flow. Basically, there were two vocalists I worked with, Joan Pollock and then some months later, Trish Anderson, because I felt Trish had a strong voice. I heard her [Trish] in a performance at a concert toward the end of 1993 at La Trobe. The things she was doing were the kind of things I wanted to hear, or wanted to use. I had already spent a lot of time processing sounds from Joan ie, putting them through a variety of transformations, doing LPC analysis and resynthesis, creating sustained textures by predominantly granulation and motional spatialisation, which for me, is an important part of the piece; fairly radical modulations. . . .

*Modulations of which parameters?*

Things like delay times, and ring modulation and phase vocoder time stretching. In some instances I tried to match the original sound by synthetic means which didn't generally yield much success, ie FOF synthesis (to fade in and out). I have to say that the piece itself was really the result of a number of experiments and my initial ideas were a little more ambitious than the piece turned out. There were some strong reality bounds, if you like.

*So before you start composing, you have a more or less clear notion of the sound world the piece is going to occupy? And there is an attempt to come as close as possible to that sound world under the given conditions?*

In some instances, but I wouldn't say that for the whole piece. It's as much a result of the final processes as it is of what I initially imagined. And in some ways it still falls short. The imagination is a much more powerful musical instrument than the computer.

*People often ask the question how long did a piece take to compose, but I think a more interesting question might be what is the time lapsed during the composition of the piece, or the relationship, time lapsed to time taken?*

I had an interesting conversation with Ian Fredericks not so

long ago about this; [because] I said the piece took me three months and I said that was a long time and he gagged and said a year's not a long time. Although three months was the time when the solid work was done on it, there was a lot of solid preparatory work spent working with the sounds and conducting my own experiments into signal processing. Really the piece is about the sounds and their relationship with what can be done on the computer.

To answer the question, probably roughly three months in hard work and fairly constant application and probably the better part of 6 - 7 months overall, although I would say that some of the experiments were earlier than that, so its not that easy to quantify.

*Part of the process must be to learn the material. If you think about writing instrumental music, you might spend 10 or 15 years learning those types of sounds.*

Well that's true, but in a sense there are a couple of differences. One is that I am using materials that are predominantly already in existence; so that someone else has put in that practice and here, we're talking about performance. You could argue the same thing about composition where "ok I've spent the last 15 years working out how to successfully modify an effect and compose sound in terms of the domain of the studio". But that's moot because it applies to both scenarios. So again, I would say that my original figures are realistic for the specific application to that piece.

*You were talking about auditioning and experimentation in terms of selecting a process. Did you find you started to develop certain strategies for selecting some material over another or changing a process and re-synthesising?*

Well I think that's were the overall form of the piece was really an important determinant; because I would go off on a lot of fairly big side issues; and get side tracked. I spent a whole lot of time building a channel vocoder which is actually previous to this composition on the ISPW and I had plans to use a lot of this material because I quite like [that sound of] channel vocoded sounds, depending on what you are cross-synthesising it with, but I didn't get to use any of that material because it didn't sit anywhere.

That might have been different had I spent more time on it [the

piece); and had I better instantaneous facilities. By which I mean; every thing was done in sections, so that at one stage, in the last section of the piece, I had worked with particular techniques for a particular set of sounds to get that sound world. And in other instances, I would be working at home on disk based non real time processing; which is predominantly a major part of the piece. Which is very frustrating because you have a large turn around time. And then there were instances where I had put a lot of these sounds in a Kurzweil K2000 when I could get my hands on one, which actually yielded quite a lot of material in a relatively short space of time, but again, that didn't all get on to the final version.

In fact, not a great deal of it is the material off the Kurzweil, because I found it didn't sound bad, but the more radical the K2000 processing is/was the less 'beautiful' the sounds were. Something is lost. Some of my decisions were based on a desire to maintain a fairly high level of quality to the sounds. So that I didn't want to do all these processes where they would reduce what I would perceive to be the quality of the sounds. Some people think that is a bit of a hang, a neurosis if you like, but I think that is one of the real benefits of working in this sort of area because, with respect to sound quality, you can be very specific about what you are doing. I've heard people argue that having high quality sound is a sign of the technocrat, but I think you could just as easily argue that having low quality sound is basically like someone not paying attention to a very big part of what they are dealing with. I mean, it's just as much a skill to record these sound successfully. I might add that there are a lot of problems with these sounds, they are not that good in a lot of instances, but that's an important part of the art. I think that if you collect your own sounds, its better for you to have the best quality you can, because you can always distort [the sounds]. And some people would argue against this as well. But I would say that you can always distort sounds, but can never 'undistort' them once they are so. Its a bit like the resonances of space, that once you blur the sharpness or detail of a sound then there is not very much you can do to regain that original sharpness. So you want to start with the sharpest material you can get.

*When you first said the word 'quality' I instantly had two meanings, one was the technical quality of the recordings of the sounds, the collection of the sounds and the second was the use of the word quality to speak about that which identifies a particular sound as that sound. I think both meanings are interesting for the ambiguous relationship they have..*

Well I am interested in both senses of the word quality. However, all my previous rave was about the notion of quality in terms of sonic fidelity.

*But how far do you push processing; because a particular aspect of this type of composition, that composers will say is the reason they do it is the ability to distort and create very diverse material from very unified sound sources.*

Yeah, I agree with that. Of course this is the semantic issue of the word "distortion", like the word "quality" as used earlier in our discussion. However, I think if you start with good sounds

and are careful of the processes you use, you can make virtually any distortion process sound good - and in this sense, any processing is essentially a distortion. And yet, if you are sloppy about your recording and sloppy about lets say the processes then the result is likely to be sloppy squared. I think in some instances this is similar to what I was saying about the K2000 where I don't know if it's the product of the processes or a product of the machine or the converters or maybe a sum total of all these things, but it never sounds quite the same. It doesn't sound bad, but there is just this quality about it that never seemed to be in the sound in the first place - artefacts.

One thing I found with the signal processing of sound is that artefacts on the recording at the collection stage, while they may be tolerable at that point, or not easily noticeable, certainly don't remain so after certain processors. And can actually start to intrude on the sound in an undesirable way. I think there is an argument for a technique of this kind of work.

Well, I'm not trying to be hard lined about this recording thing, because inevitably, it is up to what the individual wants. I think the other thing is that mistakes can yield a lot of good things. I'm not that much of a fascist where I have this idea and it has to be realised in exactly that way and it has to sound perfect because the pieces I do are basically a set of compromises and I think that applies for most people working in the area. But, I think it is interesting that a lot of processors yield artifacts that are similar no matter what the driving function is. You can pick certain sound processes . . .

*An example . . . ?*

Well, the resonant comb filter ; you can virtually drive a resonant comb filter with anything and get virtually the same sound so its almost an instrument unto itself, or a particular simple box. Its only a step away from the Karplus-Strong plucked string algorithm anyway. Now there's nothing wrong with that kind of processing and again I used that in the piece but somehow it seems to me that some of these things sound good and some sound bad - or at best, really obvious. There are a lot of people who will come back to me about this and say, you know that's all bullshit, but that's fine, I'm not out to please everyone - this is what I think about it.

*Can we talk for a moment about the software and hardware utilised in making Chromophony.*

Simple recording set-up onto DAT for the vocal sounds. Then selectively categorised and then transferred onto my HD via Protools DAT IO. Transported to a variety of signal processors on the Macintosh; SoundHack, CSound, Sound Designer etc. I had to also transfer a lot of sounds to the NeXT to do LPC analysis as there is nothing on the Mac that I know of to do that ; Csound could do the resynthesis but not the analysis.

I constructed a program in MAX where you generated a granulation score but also had a graphic means of representing the sound trajectory because I wanted cyclic granulations to happen. I didn't want them to sound like granulations as much

as getting a long sound out of tiny fragments. The trajectory bit worked well because I fudged a doppler element into the program that meant the faster you drew, the less grains there were but the pitch transposition would be greater. The sound was actually created using these scores in Csound.

*Could you give a description of cyclic granulation.*

What I did was to have a very subtle Doppler shift in these very circular left-right motions that would basically create the effect of circular motion to the listener without the use of more than stereo speakers. So it's like moving in a circle in front of you rather than in a circle around you, that accounts for the "cyclic" part. The granulation was used to get long sustained sounds from short fragments. In this case the fragments were different vowels sung at a variety of pitches - about 40 of them. I used more typical granular sounding textures as well. Actually, some time after I created the program I mentioned before, Ross Bencina decided to write a dedicated granular score program called Curve Control which I also used towards the end of the piece. It was much easier to use than the Max program but you couldn't easily specify the trajectories.

Then there was the ISPW which I mainly used for comb delay type effects and for amplitude modulation effects. Very low-end use of that machine, but it yielded some good results. Some Phase Vocoder time stretch (with SoundHack), and I do have to send Tom Erbe a tape. That was quite useful, although frustrating to wait for. At one point, towards the end of the piece, there is a four second sample that had been essentially stretched to eighty seconds, ie. twenty times, which on my machine took a couple of overnight sessions. It's a bit blurred, a bit fuzzy, but that's probably my choice of analysis parameters more than anything, and of course, stretching the material that

far. It's this whole idea, that whatever process you do, you are going to get these artefacts, with some more evident than others.

The K2000 - while I'm being hard on it, was very useful; again for circular motions, but also funky little filtering effects, and assembly of smaller sound elements into larger more manageable sections. It has a whole variety of different emphasis filters built into it, which I used, generally modulated.

While I like the whole idea of staying digital...I ended up using an SPX-90 and a Microverb III in some instances, which I would have preferred not to have done, but there was no choice - I did a lot of processes in Csound but I hadn't written a good reverb, or found a good reverb for it. And again the use of the ISPW has the same problems, although that's recently been addressed I think, with much better reverberations. Pro-Tools and Sound Designer were used as compositional tools also.

*As the compilation part of the package opposed to the processing part?*

Yes, but in the first few sections, I had some signals being processed, while others not, and some of the panning effects I actually did in Pro-Tools. So I'd say that that was partially compositional, as well as just assembling or compilation which isn't really that different to sequencing - except there's no controller. Although what the distinction is between compilation and processing, is often hard to say.

*The second part of this interview will appear in the next edition of Chroma.*

## ACMA Concert No. 2, 1994

*6:00 pm Sunday 20th November*

**Elm Street Hall  
Elm Street, North Melbourne**

The program features works for tape, marimba and live electronics.

Some space still exists in the program for extra works, so if you have any appropriate material, please contact:

Lawrence Harvey - email: [harvey@music.unimelb.edu.au](mailto:harvey@music.unimelb.edu.au) phone: 387 8474 or  
Alistair Riddell - email: [amr@farben.latrobe.edu.au](mailto:amr@farben.latrobe.edu.au) phone: 417 3538

# ICMC 1994

This years International Computer Music Conference, held in Aarhus, Denmark has garnered a number of responses. Here are two reviews of the conference and some comments and replies to those reviews. All reports & comments have been lifted from the Internet

## TRIP REPORT ICMC 1994 -- Aarhus Denmark John Fitch

I attended ICMC from Tuesday evening until Saturday night. Of course with 3 or 4 way sessions this is not a full report, and the opinions are mine. I have the proceedings.

### TUESDAY

#### CONCERT 1

The Conference started with a concert on Tuesday evening, given by Cikada from Oslo. Most of the work was for chamber groups and tape/electronics. The first work was a string quartet, piano, electronics and tape work by Stephen Montague, a world premiere. This was one of the highlights for me. He has such interesting sounds from the strings, and I think he ended with a passage with practice mutes. The other work I remember was "anti-paysage" by DeLio, which made good use of silences and long delays. The notes described it as "to barely cohere" and it was just that.

### WEDNESDAY

I spent the morning in the Performance Interfaces session, with a short excursion to Composition Systems.

#### Towards a New Model of Performance

Mon-chu Chen

I did not find anything of interest in this paper. It covered an analogy between pictures and sound, but seemed to ignore other work. I suspect that the author did not know about it.

#### A Meta-trumpet(er)

Jonathan Impett (presented by the instrument builder)  
A traditional trumpet was instrumented to record performance gestures, and converted these to MIDI. There were many pictures of the trumpet, which had pressure pads for fingers and valves, wind pressure, and a tilt measurement on the bell. Programming was in C, with actions on events. There was a sonic example.

#### Adaptive Timbre Control using Gesture.

Four authors from Waseda University.

Described a musical instrument using a data glove, linked to a neural network. They use a 5-layer NN with only 2 neurons in the middle layer, in an attempt to capture a 2-d emotional space. Training by back-propagation. A nice idea but to me there was not sufficient variation. Still there are possible applications for disabled people.

#### MUSICAL LANGUAGES

Lambda Calculus and Music Calculii 4 authors from Lyon, France

An excellent introduction to lambda calculus concepts of Abstraction and Application. Illustrated with a graphics abstraction, which worked very well. A music calculus which uses things like e note abstraction was less persuasive; using the Omega operator to generate infinite sequences was rather odd. They developed transposition, and generation. They have not yet done a Church-Rosser theorem for their calculii.

One of the most interesting papers to me though.

#### Abstract Time warping of Compound Events and Signals Roger B Dannenberg

This followed from the previous paper, as it used "Abstract" in the same sense. Functional programming languages such as Nyquist have stretch and shift operators.

$$\text{shift}(d)(t) = d+t$$

$$\text{stretch}(s)(t) = st$$

and these can be combined by functional composition eg

$$(\text{stretch}(10) \circ \text{shift}(2))(t)$$

A time warp function maps logical time to real time with a continuous monotonic function. Point of paper is to show that shift and stretch are both variants on a time warp operation. Moving to continuous functions such as signals what should be warped? FM, vibrato can be warped but not tempo (cos of pitch changes). Drum rolls should not be warped either. His language can control this.

[Local reference; David Chapman should check this out as his doors would seem to address the same problem.]

Mail to dannenberg@cs.cmu.edu for copy of the system

In the afternoon I attended the Additive Synthesis and Sound Synthesis sessions.

A Multirate Optimisation for Real-time Additive Synthesis Phillips, Purvis and Johnson, Durham, UK Helmholtz additive synthesis is very expensive in hardware. One can use software, with choice between brute force n oscillators, or FFT techniques with frames. They use optimised direct oscillators, using slower sample rates and multi-rate techniques. Use of complex numbers and other

stuff gives a 12-fold speedup in theory, but 7x in practice. Work continues.

### Neural Networks for Musical Tones Compression, Control and Synthesis

#### Bresin & Vedovetto, Padova

Control of many parameters is necessary for modern synthesis. Hope is to use NN to control the parameters -- they use in additive synthesis context. I got a little lost, but I think they have 24 inputs, 10 or 12 hidden layers and 3 neurons to control points. This gives a 3-D space in which one can site instruments, and this opens possibilities for morphing. Implemented on a NeXT.

### Control of Frequency and Decay in oscillating Filter

#### Frode Holm

"How can you resample a recursive filter" such as a Karplus-Strong system? The paper examined this in a new light. It turns out that Csound already does most of what Holm was proposing. Details are in the proceedings. Sound examples were hard to follow for me.

### Circulant Feedback Delay Networks

#### Rocchesso and Julius O Smith

I did not understand this -- much linear algebra, related to reverberation I think. Physical model is multipath reflections. They had applied to a 2-D Karplus-Strong for resonating bass.

## CONCERT 2

An afternoon concert. I remember an algorithmic work from Rich Taube "*Gloriette for John Cage*" for mechanical organ (and it is on the CD) but was not convinced by it. There was a work for Hardanger Fiddle and tape by Magnus Eldenius which I rather liked -- it used the sampling of a Hardanger Fiddle. An improvisation for trombone and interactive computer music system by George Lewis was well received, but did nothing for me. I did enjoy *Jurel* by Adolfo Nunez, a tape work based on the sounds of a flamenco performance including clapping and dancing. But the outstanding work was *Piano Nets* by Denis Smalley, played by Philip Mead. The tape and piano were so clearly playing the same work, and the sounds of the piano emerged from the tape cords in a way I really liked.

## CONCERT 3

Performance and Multimedia, in the Orchestral Hall. Five interesting works, all varied, but all with multiple arts.

Esquisses by the ACROE group in Grenoble was a film of physical modelling of sand particles (silent), particles in wind with sound from models of aeolian harps, rain drops falling into puddles, and a simulation of a clock driven by a heavy chain, with time marked by striking bells. See also the paper on this.

Yo was a performance for a person in an electronic controller suit. Certainly interesting to watch, but not totally convincing as music.

*Tiku an no uryu II* was an 11 minute work for shakuhachi and computer. The flute was wired so the physical movements of the instrument were fed to the computer. Images of cranes (the bird!) as shadows accompanied the performance. Again interesting, but not shattering.

*In Emptiness, Over Emptiness* by Michael Matthews for Voice and tape finished the first half of the concert. I did not take to it greatly, although the singing was excellent.

The prize piece was *Faustos Schreik* by Michel Waisvisz, who played The Hands, with Patrizia von Roessel-Tuerlings dancing and the child voice of Fausto Senese. It is hard to describe; the dancer started on the shoulders of the composer, and later she manipulated the arms and positions. The boy shouted in the later parts of the work. The dancing was magnificent, appropriate, venomous at times, and physically very demanding.

## THURSDAY

I spent the morning in the physical models and Compositional Systems talks.

### Stability/Instability of Periodic Solutions and Chaos...

#### Xavier Rodet

I missed the start of this rather difficult work. It involved the solution of certain equations using homotopy. It was interesting, and could be useful in the analysis of the Richard Dobson non-linear wave forms, and it included something which gives me an idea of how to control Richard's sounds from blow-up. This paper will need further study.

### Dynamically Configurable Feedback /Delay Networks

#### Hammon, Illinois

This paper was very badly presented, but it was about graphical instrument design, separating signal control and generation, with excitors, resonators and output. Implementation is with processes and pipes. Excitors include single pulse, pulse stream and sample files. Resonators are delay lines, multipliers and a network. The net is described by an ASCII script, and the processes etc are built. My notes say "I think the science component is low. A fun world, Rule-based composition"

### Organizing the Parameter Space of Physical Models...

#### Feiten & Behles

Use of Kohonen Feature Map (KFM) to get a topology preserving 2D map of feature space. Experiments show that a 5th power distance rule is the correct one. This distance is used to say how similar sounds are. There is some NN training involved. Basically this is a form of data compression. Can move in the map space and vary the sound in a continuous way. There are problems with each point not giving identical sounds, but the direction of approach affects it. Interesting.

### **Intelligent Synthesis Control...Physical Model of Acoustic Guitar**

**Janosy (Budapest) arjalainen and Valima i (Helsinki)**

The aim is to play an acoustic guitar from a keyboard. Comments were made on the way in which a note affects the next one, and particular guitar features like a hammer on and pull off. It was interesting about guitar technique, but no messages for me.

### **Formal Processes of Timbre Composition**

**Di Scipio (read by someone else)**

This was a philosophical account of the cognitive dualism of electro-acoustic and computer music, with concepts like algorithmic composition being about syntax of form, and timbral composition about semantics of sound and emotion. He was opposed to the dualism which is found in the ORC/SCO division. Xenakis, Pousseur and Stockhausen have all looked at microevents, related to granular synthesis and Xenakis' gendy. These styles require algorithmic construction as there is so much to do. The software desire is music systems which give freedom to composer's model of music composition -- and not the dictatorship of the ORC/SCO division.

### **Algorithms Adapted from Chaos Theory**

**Harley (McGill)**

Another unsatisfying presentation. Uses chaos theory as generators, but mapped them shamelessly.

non linearfns --> mapping in [1,12]

--> freq. distrib (histograms)

--> reordering

The reordering rather denies the relationships inherent in the chaos material to my mind. The talk quickly became an example of a composition, said to be based on the Queen of the Night aria from Flute, broken into phrases and chaotic choice of phrase, pitch and start time. I had the disquieting feeling that it was being used as an excuse to play this work, which to my ears was much worse than my Drums and Different Canons, which is also generated by chaos functions.

### **The Morpho Concepts**

**Teruggi (GRM-INA)**

A brief history of Musique Concrete (1948) and Electronic Music (1950) to Electro-acoustic music (1960) and computer music. Acousmatic is a descendent of tape music, music with no physical manifestation. My notes become incoherent at this point(!).

## **CONCERT 4**

7 works; I found again that the tape works interested me most. The Music for Clarinet and ISPW by Cort Lippe was interesting (I had heard it before), and the work OverBow by Atau Tanaka, for solo BioMuse performer was visually interesting -- the BioMuse works from muscle tensions on the arm. The performer waves his hands, and sound! My favourite from the concert was Noises by Peter Lunden. A tape work which was at times so loud as to cause worry about the speakers. I found it original and varied. It was

composed using the CCPL and Csound software systems.

### **Is there Life after MIDI**

**Miller Puckette (ex IRCAM, now UCSD)**

This was a most interesting presentation, largely because of the character of the presenter! There was a strong attack on the MIDI model of music, as inflexible, and over complex. A nice quote: "I do not control paper well,...I control computers well; they just sit there and get on with it. It is what is inside which gets out of control". As composers listen to their own music more than anyone else's, use of a MIDI-Yamaha synthesiser will restrict one's vision. The later part of the talk was on advice on prices and software bases. Discussions of OS bloat, and problems introduced by windows. Currently the only real-time OS is SGI, but tracking X is a large investment. Best solution is to avoid software! Csound, cmix and CDP were given as solid systems on which one may depend. There was an estimate that 2GFlops is the needs for music.

I then spent some time wandering around the exhibitions, and also caught 2 studio reports; Mara Helmuth on her new establishment at Texas A&M, and Leigh Landy gave a very "political" description of Bretton Hall in Yorkshire. They have a new degree course in modern music.

## **CONCERT 5**

### **Royal Danish Ballet**

There were 6 works, 4 with dancing.

The opening work was Russell Pinson's *Music for Margo's World*. Musically I enjoyed this; it sounded like it was intended for dancing. Unfortunately the choreography was poor -- static and dull. I actually decided that the dancers were not very good (which was shown later to be false). A missed opportunity.

*Jeux Imaginaries* by Ake Parmerud is on the CD. A nice work , but somehow out of place with the ballet.

*Huang Zhong Elements* by Kwok-ping John Chen was first rate ballet. The story was the first Siamese twins, and their courtship of two religious sisters in the USA. The dancing was first rate, and the choreography (by Marie Brolin-Tani) was sensitive to the story and the music. This was one of the high-lights of the concerts.

*Lament (Woman in a Bath-Tub)* by Marc Ainger was visually entertaining, with a single dancer in a bath, lifting limbs, and hair, body etc in beautiful ways.

Before the tape work *Tongues of Fire* by Trevor Wishart, Trevor had an announcement. There had been a number of good news/bad news announcements before, but Wishart had 2 bits of bad news, and some information. "There is nothing to watch, and it lasts 25 minutes." The information was how to recognise third of the way through and two thirds and near

the end. Actually it was magnificent. No apology was required, and the 25 minutes passed so fast. Another of the highlights of the week for me.

The last work was *Terra Infirma* by Richard Karpen. Another good dance work.

There was supposed to be a Fireworks concert after the Ballet, but it rained hard all day, so it was postponed.

## FRIDAY

I started in the main lecture room in the City Hall, for Aesthetics and Philosophy.

### **The Computer Music World View**

**Evan Chambers**

This was an ethnomusicological and aesthetic approach; a self examination of computer music. There was an association of computers with music, which for me is plain wrong, but there was concern with the shift in models of thought. We associate actions like clicking the mouse with other actions like opening a folder (a very MAC view of the world). Similarly we associate samples with instruments. We can capture and manipulate time, and in doing so we disassociate the music from the physical actions. This is the European avant-garde view, removing music from marching and dancing. There was some dissent from this paper.

### **The Extended Environment**

**John Young (NZ)**

This paper was read too fast, and my notes are bitty. The paper was considering the continuum from real to synthetic in sounds. It touched on Smalley's source-cause dichotomy, and the ideas of surrogacy. Many musical example quoted.

### **Novelty, Progress and Research Method in Computer Music Composition**

**Jeff Pressing (read by someone else) - [Robert Bell - ed.]**

An examination of the ghetto syndrome with electro-acoustic music. Much of the paper was taken with the difference between internal hearing as better than development with instruments, and how computers encourage the latter. It accepted that pitch and scale are real and based in the brain, rather than training and familiarity. More reasonably it argued that there are no tools for analysis of computer music, but only the mechanism for creation. It did draw attention to the 1/f noise distribution which is now accepted as fact (In Moore, and Dodge for example), but is now seen as wrong in fact.

### **Local/field -- towards a typology of live electroacoustic music**

**Simon Emmerson (City Univ)**

Looked at the difference between Live and Real-time, and the three acousmatic dislocations -- time (recording), space (telecoms) and mechanical/Acoustic causality (Synthesis). Local controls are those related to the performer, in which field refers to the wider placing of the activity within a context. It drew attention to things like amplification losing human control intimacy, and a mixing desk and large

auditorium have problems of effect. A philosophical investigation into why have performers etc. Interesting.

### **Analog Signal Processing**

**Adrian Freed**

Old technology does not die (the first FAX was in the 19th century!). He showed that analog synthesis need not be noisy, and can retain direct control with knobs and dials. At present analog circuitry is expensive, mainly because of the digital stuff to control the analog with respect to temperature drift. Analog VLSI would obviate the need for most of this. He sketched circuits for multipliers, square roots etc, and showed a universal analog circuit from which a general architecture could be evolved. There are design tools; the next stage is to build.

### **A New Network and communications Protocol**

**McMillen and Wessel (Berkeley)**

They presented ZIPI, a replacement for MIDI. It is a Peer-peer architecture, cheap at \$5/module using serial communications chip. An open efficient token ring method so have guaranteed response. 250 kHz speed and small processor load (unlike MIDI). Uses 7pin DIN plugs with current loop, and is bidirectional. A ring has 253 max connections, and one is a ring monitor. Rings can be joined. The language is called MPDL, and is a 3 layer hierarchy (family, instrument, note). Pitch at 0.2 cent resolution. Also has a loudness concept. Data can be time tagged to overcome MIDI drift. There is scope for gestural parameters. Conclusion is a low cost, multi-sourced hardware, true network, deterministic etc. Will be published in CMJ.

### **Physical Models for Music and Animated Image...**

**ACROE group.**

This paper described the technology behind Esquisses performed earlier. Fascinating stuff, which should be publicly available next year. Looked like a lot of CPU time!

## **CONCERT 7**

The 8 works in concert 7 contained some of the best, most memorable and worst pieces. It started with *IMAGES*: the pop can, a live performance by Ronald E. Alford and Candace Lowe on pop cans, crushed, hit, rolled and otherwise used to create noises. It was performed rather as theatre, but became a set of set pieces, rather than music. Christopher Penrose's *Manwich*, a tape work, also considered references to American icons, but is a freewheeling manic form. This was a work I had looked forward to, and was not disappointed.

### **PANEL SESSION**

The afternoon started with a panel session. Assembled by Stephen Pope, the composers Taube, Karpen, Garton, Jaffe, Rahn, Scarlatti and Morales were posed a set of very general questions of Composition and Performance. The initial statements were approximately:

**Morales:** Each composer has his own aims in using a computer. For me it is speed of realisation of a work.

**Scarlatti:** Not so much touched as sucked down into computers. Address problem of recordings building up, with

nothing lost.

Rahn: Started as a performer. Freedom from notation, ability to perform symphonic.

Jaffe: writes both instrumental and computer music; the music transcends the medium. But computers having no boundaries is rather frightening. Concentrating on boundaries.

Garton: Used to believe Wishart/Emmerson's vision of changing the world, but the InterNet brings out the worst. Now has moved to an ultra-elite -- self and wife. It is just fun in itself. Anti-concert.

Karpen: Teaches computer music, and a few students take it up. Should they learn 'correctly' with counterpoint, harmony etc and limit time to compose? Still wants discipline.

Taube: Computers do not speed it up for him. Interest in ambiguity and complexity. Also worried about lack of boundaries, so much to explore. Also audiences not following. Lack of connection between performer and sound.

Garton said that our music is irrelevant, it will not effect anyone (cd Michael Jackson). Morales took the classical performer view. Trevor Wishart interjected that we all live in big cities, doing the same not being individual. He stated an anti-university and anti-monastic view. The job of the composer is to go out and communicate. Everyone should be involved. Garton disagreed, taking the global village metaphor. He was supported by Penrose, and opposed by Roenisberg who supported Wishart. Someone I did not identify, who described himself as a software man, stated an individualistic, rather capitalist view. Landy pointed out the European/American dichotomy. Europeans are seeing the collapse of their culture. It took me some time to realise what I did not like about this panel. All the panel except Taube were north Americans, and he was educated in Stanford and Iowa. There was a lack of the European dimension in the panel.

## CONCERT 8

The Athelas Ensemble gave this concert. The interval was moved so there were 5 works in the first part and one in the second -- apparently because of player problems. I did not care much for Jaffe's 4th movement of the Seven Wonders of the Ancient World. Winter Aconites by Frances White, in memory of John Cage, was much more to my taste. The fifth work was a tape work-- The Raven's Kiss by Howard Fredrics on the CD) which struck me with its use of human speech. The other works did not impress much.

CONCERT 6, the fireworks, did follow, despite inclement weather. I think that it was shortened. After a short, and loud, procession and fire eating work, the main music and fireworks was appropriate and well performed. The fireworks were very good.

## SATURDAY:

### Real-time Musical Applications using FFT-based Resynthesis Settel and Lippe

The basic structure is FFT->actions->IFFT. For example use of spectral envelope with convolution in real time. Similarly it can be used to do subtractive synthesis with noise. There were a number of examples of different effects like an LPC effect etc. The sounds were good, but the presentation bad. The hardware is ISPW single card in real time.

### Denoising & Reconstruction of Audio Signals Berger, Goldberg, and Coifman (Yale)

A general denoising algorithm (Coifman & Wickerhauser 1992). Basically using a library of orthonormal bases, including sine/cosine, look for the best match -- say the harmonic bit. Remove it, and then look for next best. What is left at the end is noise, which is always smeared over all the dimensions. Example of use from Caruso tapes being de-noised. The examples were good, but not perfect.

This was one of the best papers.

### Sound Hybridization based on a deterministic+stochastic decomposition

Xavier Serra (Barcelona)

Hybridisation with Short-time Fourier Transform (STFT, or Phase Vocoder). LPC is also related. Used for combining two sound sources. It seemed fairly basic stuff. Also Spectral Modelling Synthesis (SMS) for tracking of peaks in the spectrum. Main message is to combine these two.

### Adaptive Karaoke System...

I came on this paper while arriving early for the next. It was a total scream! They were exploiting the syllabic form of Japanese to follow the words sung, and changing the speed of the accompaniment to match the singer. Also they are working on pitch-tracking to shift the accompaniment to the "correct" key! The video examples had us rolling in the aisles.

### Design and Implementation of an O-O Media Composition Framework

Ackermann (Zurich)

A Multimedia integration project (MeTH), with text, windows, images, video, audio and MIDI. A set of virtual classes to embody all this which are then specialised and instantiated. Audio is modelled by a source-filter-sin architecture, and a class hierarchy so audio-IO is specified for a processor-type. Loading is dynamic, configured by platform of application (an abstract factory). Synchronization is object based, both temporal and other structure combined. Wrapper methods are used for tempo, and multi-views in time etc. All reusable classes and combinable objects. I had trouble evaluating this work .

## CONCERT 9

It may have been that I was getting tired or jaded, but this concert did not impress much. Exceptions were Spleen, a tape work by Robert Normandeau which had purpose and structure, and Larry

---

Austin's Rompido! for tape, which was well crafted.

#### Blind Decomposition of Concurrent Sounds

Ueda and Hashimoto (Waseda)

They tackled the problem of given a combined signal of two instruments, can one decode the two instruments. As long as the conditions

1. Spectrum is represented by sum of two spectra
2. Sound frequency keeps shape over amplitude
3. There is at least one frequency for which C1 is non-zero and C2 zero.

By considering a combination of the signal at different times they could decode the two. Improbable, but the examples were fairly good (Clarinet, Violins separated well, clarinet and noise less well). With speech it worked much worse.

#### Complex Musical Pattern Description in Common Music

Heinrich Taube

For complex read hybrid. The paper was a description of a stream object which allows periodic use, using multiple inheritance (mixins) the aggregates can be arranged to create motives. Various patterns proposed. It was all rather over ill, and ignored various problems on reproducibility and random generators.

### CONCERT 10

The full Aarhus symphony orchestra, with both Gutman and Mead as pianists. Particularly notable was the work Clocks by Elena Kats-Chernin. The tick-tock sound of the tape was augmented and explained by the 20 players (actually 21 as the procession was done by three rather than the two in the score). Lanza's Piano Concerto (for MIDI grand) was well played by Mead, but did not strike as a great work. The concert ended with Bells of Earth by Thorsteinn Hauksson, a rousing work with fine timbral interplay between piano and harp, and other effects. We decided that we were too tired for Concert 11 (Computer Jazz) and reluctantly punted on the ICMC 1994 Surprise by Fuzzy (performed by Fuzzy with MouseHouse). So far I have had no reports.

I have not so far mentioned the three installations. A Lego robot drummer accompanied computer music. Interesting, but I was fed up with the sound by the end of the week. The Sound Lodge outside was rather rained off, but the wind played it one lunchtime(!) and I did play it myself in the rain. The prize was the Electric Swaying Orchestra (Sound Sculpture) by Bosch and Simons -- I cannot explain it; pendula swung, 3 with speakers and 3 with microphones.

--John ffitch

23 September 1994

## ICMC 1994 - The Human Touch

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#### Introduction

The 1994 International Computer Music Conference (ICMC) was held in Aarhus, Denmark on 14th to 17th September, under the title "The Human Touch". It was organized by the Danish Institute of Electro-Acoustic Music on behalf of the International Computer Music Association. Over 350 people attended the conference, including seven Australians. There were about 150 papers and demonstrations (selected from approximately twice that number of submissions), and ten concerts with 59 pieces (selected from approximately 400 submissions). Among the successful submissions were five presentations and two pieces from Australia. The successful pieces were by Elena Kats-Chernin (who I think was unable to be present), for large ensemble and tape, and Stuart Favilla, an improvisation for his LightHarp. A version of Stuart's piece was included on the conference CD, a high honour. Aarhus (population 270 000) is Denmark's second largest city. It is proud of its cultural activity, with its own symphony orchestra, several theatres, opera and ballet performances, numerous museums and art galleries, and various festivals. The high level of culture may be gauged by the fact that Dame Edna Everage will be playing there later this year.

The conference was held in and around the Concert Hall (Musikhuset), which in fact contains two halls, one with 1500 seats and one with 300. Everything was organized very smoothly, and although the announcements of conference chairman Wayne Siegel beginning "The bad news is..." and "The good news is..." became a running joke, there was very little bad news. The weather (generally damp and gloomy) forced first the postponement and then the partial cancellation of an outdoor concert with fireworks (though we still got the fireworks). As is usual with these conferences there were generally several things happening at once, so what follows is just some of my experiences, not a definitive report.

#### Keynote address

This was given by British composer Trevor Wishart. He outlined three areas where the computer allows us to do previously impossible things:

- (1) the incorporation and manipulation of real-world sounds (going far beyond simply playing recordings);
- (2) the logical organization of sonorities, which become as important as pitch and duration;
- (3) the construction of interactive computer music systems.

Wishart also called for composers to make electro-acoustic music available to a wider public, in three ways: by providing points of access in their compositions (for example by the use of vocal sounds, which are familiar to everyone); by making the marvellous tools developed in institutions available to the general public at a reasonable price; and by educational programmes. Wishart played examples of work created by children and old people with his assistance, and stated that the musical language (of electro-acoustic music) has not been a problem.

#### Papers, posters and demonstrations.

These covered the usual wide range: specialized hardware, sound analysis and synthesis, computer modelling of instruments, manipulation of sound in three dimensions, artificial intelligence applied to music, software for compositions, interactive performance systems (a large number of papers), issues from music theory and aesthetics, and studio reports.

Two interesting presentations on classification of timbre were given by Robert Bell (La Trobe) and Peter Lundén (Sweden). Bell gave a very detailed classification of percussion timbres, using criteria from spectral analysis, psycho-acoustics and performance practice, while Lundén gave a broader but less detailed classification more oriented towards sound synthesis. Lundén's system was used to compose his striking tape piece "Noises", which was performed at one of the conference concerts.

There was some emphasis on "alternate controllers" (any electric or electronic controller other than a keyboard). Jorg [should have an umlaut over the "o"] Spix (Germany) demonstrated his "digital trautonium", an updated version of the instrument invented by Friedrich Trautwein in the 1930's. The new instrument generates its sound by real-time computer synthesis. Spix had it set up to recreate the timbre of the original trautonium. Stuart Favilla (La Trobe) showed his LightHarp, a MIDI controller which looks like an Indian stringed instrument, but without strings. Instead, sounds are triggered when a shadow cast by the player's hand falls on a line of light-dependent resistors. A wand held in the left hand controls pitch-bend (or any other MIDI control).

Analysis and synthesis of the human voice have made considerable progress. Peter Pabon (Netherlands) demonstrated his real-time analysis and synthesis system by singing into a microphone. The system analysed his voice and synthesized a female voice singing the same thing an octave higher. The process was fast enough so that the effect was of two voices singing together. A remarkable presentation was made by a group from IRCAM (Paris). They had the job of providing a castrato voice for a film about the famous 18th century castrato Farinelli. This was technically difficult, as apparently castrati had huge ranges (up to three and a half octaves), great agility, and the ability to sing very long phrases in one breath. The IRCAM team recorded a counter-tenor and a coloratura soprano, built up a database of sung phonemes, and carried out elaborate spectral modifications to produce a

single voice, consistent over the whole range. The problem was made more difficult by the fact that one of the singers refused to wear headphones, and so one set of vocal source material was substantially contaminated by the orchestral accompaniment.

The result of the processing was to create a voice nearer to the counter-tenor timbre, in accordance with the wish of the film's director. The results sounded pretty good to me, except in some very rapid runs.

The IRCAM team do not claim to have created an authentic castrato timbre, since no-one knows what that was. There are some recordings from 1904 of the last European castrato, Alessandro Moreschi, but they are of such poor quality as to be useless. Also apparently Moreschi was not a very good castrato, the tradition having essentially died out by his time. As the IRCAM team point out, this work makes a vanished repertoire available again, even if not in the form of live performance.

There was a special session on "foot-tapping", or beat induction, where a computer listens to a melody and attempts to discern the beat. The demonstration I saw featured a mechanically activated ladies' dress shoe, which indeed tapped out the beat, once the computer had found the pattern. I'm told there was a second demonstration using a gumboot.

There was a panel discussion under the title "Touched by Machine? Composition and Performance in the Digital Age". This became bogged down in a discussion of the composer's role in society, but Richard Karpen (U.S.A.) raised an issue that is I think quite widely discussed. Computer technology allows people without traditional musical training to start composing. What path should these people follow, in order to acquire the discipline of composition? Karpen suggested that perhaps the time has come to give up some of the past, and look more to the future; maybe species counterpoint should not be required for everyone. (Since I am one of the people Karpen was talking about, I was interested in this, but no-one followed it up.)

Another panel discussion was held on "Instruction in Computer Music for Computer Engineering Students and Professionals". Computer graphics is taught in every Computer Science department; why not computer sound and music? There are several potential commercial applications of the skills and knowledge developed in the computer music community. Score following applied to interactive karaoke machines is one. (Don't laugh: it could be worth a lot of money, and a preliminary version of such a system was presented at the conference.) In interactive multi-media, a real-time composition system could adapt to user-selected changes of scene, for example, much better than any system relying on canned sound sequences. In virtual reality systems, a sound emitted when a virtual object is touched (for example) should appear to come from the object, not from inside one's head. A related development is the formation of two new professional groups: SIGSound (Special Interest Group on Sound) of the Association for Computing Machinery, and the Technical

Committee on Computer Generated Music of the IEEE Computer Society. All of this suggests a need for new education programmes.

It seems that Japan is taking the lead. Someone from Waseda University (I didn't catch his name) told us that "kansei" is a Japanese word covering the emotions, sensibility, pleasure and sensation; "kansei information processing" is becoming important in Japan, with support from the Ministry for International Trade and Industry. The areas covered include things like text-to-speech processing, gestural interfaces, multimedia, virtual reality and, yes, karaoke. Waseda University is starting a course which, if I understood correctly, combines appropriate science and technology courses with courses in multimedia, computer art and computer music, the music part to include music theory and to be taught by professional composers. Roger Dannenberg said that there was an attempt to set up a Professional Masters Program in Interactive Media at Carnegie-Mellon University, but it failed to get off the ground. However Dannenberg said that graduate students with good music skills and good DSP (digital signal processing) skills are in very strong demand. DSP skills are more sought-after than general computer skills.

Two points that were made in discussion. There is an obvious danger that "music for computer scientists" could be musically trivial. On the other hand, digital audio is a wider field than computer music, as the comment above concerning virtual reality indicates. There may be an opportunity for some Australian institution here?

#### Regionalization of the ICMA

At the General Assembly of the International Computer Music Association (held towards the end of the conference), a rather vague plan was put forward to form three regional groupings, namely Europe, the Americas and Asia/Oceania. Stephen Arnold (Glasgow), who spoke about the proposal, said that the idea is to help make the ICMA truly international; there is no intention to interfere with the work of bodies like the Australian Computer Music Association. There are no details yet, and indeed Stephen Arnold (Dept of Music, University of Glasgow, 14 University Gardens, Glasgow G12 8GH, U.K.) would welcome comments. It is clear that Japan would be the dominant member of the Asia/Oceania grouping.

#### Concerts

As well as the ten "regular" concerts there was an outdoor event with fireworks, and a "surprise" right at the end of the conference. An extra 19 tape works were presented in a "Listening Room" series. The concerts really brought out the conference theme "The Human Touch", as several performing ensembles were involved.

The technology was more unobtrusive than in the past, giving the impression that the level of technology was a little lower, though I think this was not actually the case. Presumably unobtrusive technology is a sign of maturity in this field. The pieces were very varied, and on average quieter and more

reflective than previous offerings. Whether this was because all but one of the music jury were Europeans, I don't know. There was a substantial Scandinavian contribution.

The Royal Danish ballet performed four works at one concert, to tape pieces submitted to the conference. The choreography was done by choreographers associated with the ballet company. A striking image was provided by "Woman in a Bathtub", the choreography devised by Anita Sajj (Denmark) to go with the piece "Lament" by Marc Ainger (U.S.A.). The effect was of disembodied arms and legs floating above the (large) bathtub in the centre of the stage.

More striking images came from the "Performance and Multimedia" concert. The piece "Yo" by Ralf Wallin (Germany) used a body suit with stripes of some metallic material. When touched, all sorts of sounds were triggered off. (The programme notes did not contain any technical information.) Michael Matthews' music theatre piece "In emptiness, over emptiness" (for voice with live processing and tape) employed what are now more conventional means to very dramatic effect. The performer (Therese Costes) sang and danced while wielding a "fiery broom" (as someone dubbed it), a long black pole with glittering red streamers. The theatrical side of the performance was devised by Costes.

The most powerful images came from Michel Waivisz's piece "Faustos Schrei". The performers were Waivisz (wearing the glove like MIDI controllers devised by him and called "The Hands"), a dancer and a small boy with a big voice. Waivisz presented a partly robotic appearance, alternately manipulating and being manipulated by the dancer. In one remarkable sequence he was responding to shouts from the boy with an extraordinary torrent of noises, partly echoing the boy's sounds and partly transforming them into mechanical sounds.

The question arises as to what extent these are novelty or gimmick pieces. I felt there was some element of this with the body suit piece, though others disagreed. However there was no question of gimmickry with "the Hands": they were an integral and necessary part of Waivisz's piece. The piece evoked strong reactions; some (including myself) loved it and others hated it. One person even described it as emanating evil.

Three conventional ensembles took part in the concerts, "Cikada" from Oslo, a chamber ensemble with nine members, the Athelas ensemble from Copenhagen, a 17-member chamber orchestra, and the Aarhus Symphony Orchestra (which has 68 permanent members).

Even a smallish chamber ensemble has a very wide range of timbres at its disposal, so it is not clear what a tape or synthesizer part has to contribute, unless it introduces sounds very different from those made by orchestral instruments. In a piece like "Winter Aconites" by Frances White (U.S.A.) for six-member ensemble and tape, the tape part sounded as though it could have been played on a vibraphone with much the same effect. So why use the tape? I was reminded of

what I believe to be Chekhov's dictum that if one brings a cannon on stage one should be prepared to fire it. On the other hand, perhaps (as suggested above) it is a sign of maturity of electro-acoustic music that the electronic part can blend unobtrusively into the whole.

In general the pieces with the conventional ensembles did use orchestral-sounding timbres in the electronic parts, reflecting a common tendency in tape-and-live-performance music for the tape part to be related in timbre to the live part. I thought some of the most successful pieces in this group were "anti-paysage" by Thomas DeLio (U.S.A.) for flute, clarinet, percussion and tape, a very sparse meditative piece where the tape timbre sounded like a high instrumental timbre that had been dissected and spread out in some way; "Clocks" by Elena Kats-Chernin, where the tape part provided a rather ominous pulse of steady tempo but changing timbre to which the orchestra reacted; and "Bells of Earth" by Thorsteinn Hauksson (Iceland), where the tape part extended and surrounded the orchestra. Some of the other pieces suffered from overuse of all-too-familiar chamber music gestures, which the use of electronics did nothing to alleviate.

The "surprise" at the end of the conference turned out to be a

video and audio retrospective of fragments of the conference, accompanied by live music from the Danish composer, improviser and multi-media artist who calls himself "Fuzzy". Also noteworthy were two installations in the Musikhuset foyer, a life-size robot drummer made from Lego, and the "Electric Swaying Orchestra" of Peter Bosch and Simone Simons (The Netherlands). This last consists of six large compound pendulums, three bearing loudspeakers and three bearing microphones. The speakers emitted synthesized timbres, which were picked up by the irregularly swinging microphones and used to alter the sound behaviour. The whole thing was quite spectacular.

#### Future conferences

The 1995 International Computer Music Conference will be held at Banff, Canada, September 3rd-7th. The 1996 conference will be held in Hong Kong, some time in August.

The ICMA plans to continue the three-year cycle of Europe, America, Asia/Oceania. There is some polite pressure to bring the conference to Australia, presumably in 1999 (or maybe 2000). Is there an institution willing and able to host it? The biggest problem is apparently fundraising (about \$250 000).

## REPLIES TO REVIEW COMMENTS

*These replies have been taken from the oz-comp listserver, a server provided by La Trobe University Music Dept. for discussion and information on computer music. The address is oz-computer-music@latrobe.edu.au subscribe to listserver@latrobe.edu.au*

from David Worrall  
Wed, 5 Oct 1994

Thanks for your report, Gordon.  
A few acrid comments for discussion:

- ...  
> Wishart also called for composers to make electro-acoustic music  
> available to a wider public, in three ways: by providing points of  
> access in their compositions (for example by the use of vocal sounds,  
> which are familiar to everyone); by making the marvellous tools  
> developed in institutions available to the general public at a reasonable price; and by educational programmes. Wishart played  
> examples of work created by children and old people with his  
> assistance, and stated that the musical language (of electro-acoustic  
> music) has not been a problem.
- how to start a (self adulating) trend. (I found his recent voice CD really beat.). Did he give any reasons why we should provide "Points of Access"? (sound like a good title?) What are we to become, milk-sops? I prefer "Noh Points of Access" or better "Find Your Own Points of Access If You Can Be Bothered". Be warned "making the marvellous tools developed in institutions available to the general public at a reasonable price" is a marketing excercise, not a production exercise. If you really want to do this - talk to Joel Chadabe first. Why not give it away? Isn't that what the Internet's for?  
:-)
- ...  
> Over 350 people attended the conference, including seven Australians. There  
> were about 150 papers and demonstrations (selected from approximately  
> twice that number of submissions), and ten concerts with 59 pieces  
> (selected from approximately 400 submissions). Among the successful  
> submissions were five presentations and two pieces from Australia.

What is this "\*the\* language" bit? Since when? I've heard this often (and also "\*the\* sound of") and never understood why there is only one. Can someone enlighten me? And why should we assume that there was going to be a problem? What sort of problem? Problem of all those nasty (read non-vocal) sounds? Its good to see a visionary giving us the benefit of

This is interesting. My memory of the Tokoyo conference was that there was a lot of music which sounded uneventfully similar - many pieces did use the same hardware and/or software however, (you guess which one of each). Was it the same this year Gordon? Also the standard of papers was not at all consistent and there were a few bad-to-uneventful ones by

"notables" (ie those in the "scene"). It smelt of incest (pedophilia?) to me. Also perhaps the blitz against midi papers last year \*caused\* the "the-end-of-midi" paper this year. Any comments?

....  
> Another panel discussion was held on ``Instruction in Computer Music  
> for Computer Engineering Students and Professionals". Computer  
> graphics is taught in every Computer Science department; why not  
> computer sound and music?

....  
> Two points that were made in discussion. There is an obvious danger  
> that ``music for computer scientists" could be musically trivial.

Danger for what/whom? Could you give us a definition of musical triviality, please Gordon? Maybe there's a (new?) experimental artform there.

> There may be an opportunity for some Australian institution here?

Maybe. Just in case there \*is\* an opportunity, I would like to announce a new program offered at ACAT for a training course for computer scientists in kookabura synthesis. (Held by the old gum tree.) At least they'll learn how to laugh at themselves!

Q. How do you become a Scientist? or, for that matter, a Composer? Is there some secret society you have to join or do you just have to believe in the scientific method and apply the catachism (cataclysm?) in your daily life? Given the recent retraction of opportunities for study of CM in Australian music institutions,

I wonder what were the difficulties Roger Dannenberg faced?

....  
> At the General Assembly of the International Computer Music Association  
> (held towards the end of the conference), a rather vague plan was put  
> forward to form three regional groupings, namely Europe, the Americas  
> and Asia/Oceania. Stephen Arnold (Glasgow), who spoke about the  
> proposal, said that the idea is to help make the ICMA truly international;

Having a conference in a different location doesn't make it international. You have to accommodate different aesthetics and practices. i.e. stop the current cultural and conceptual imperialism!

> there is no intention to interfere with the work of  
> bodies like the Australian Computer Music Association.  
There are no  
The thought wouldn't have crossed my mind!

> details yet, and indeed Stephen Arnold (Dept of Music, University of Glasgow, 14 University Gardens, Glasgow G12 8GH, U.K.) would welcome  
> comments. It is clear that Japan would be the dominant member of the  
> Asia/Oceania grouping.

Have you got an email address for Stephen?

....  
> concerts really brought out the conference theme ``The Human Touch",  
> as several performing ensembles were involved.

do you mean perfoaming? What a worn-out idea that the music is somehow more human if there are carbon automatons scratching and blowing! That's culcha for ya!

> The technology was more unobtrusive than in the past, giving the  
> impression that the level of technology was a little lower, though I  
> think this was not actually the case. Presumably unobtrusive  
> technology is a sign of maturity in this field. The pieces were very  
> varied, and on average quieter and more reflective than previous  
> offerings.

Do you mean more nostalgic/less offensive/unobtrusive? Were they quieter because their amplifiers were turned down/less distorted? What about that presumption? anyone disagree? On that basis telescopes and particle accelerators should be getting smaller. And what about these carbon technologies - are they less mature this year because they were more obtrusive this year?

> Whether this was because all but one of the music jury were  
> Europeans, I don't know, There was a substantial Scandinavian  
> contribution.

Do you really not know, Gordon or are you just being polite?

....  
> (U.S.A.). The effect was of disembodied arms and legs floating above  
> the (large) bathtub in the centre of the stage.

an allegory perhaps?

.....  
> small boy with a big voice. Waivisz presented a partly robotic  
> appearance, alternately manipulating and being manipulated by the dancer.

Now there's an opportunity for more obtrusive technology!

> In one remarkable sequence he was responding to shouts from  
> the boy with an extraordinary torrent of noises, partly

echoing the

> boy's sounds and partly transforming them into mechanical sounds.

Mechanical sounds?? like air being expelled from a bag through a tube? What is a mechanical sound? Or was this an example of providing contrast to the 'Human Touch'?

...  
> The question arises as to what extent these are novelty or gimmick pieces.

Oh dear! Let's make sure we eliminate "novelty or gimmick pieces". Then we can get on with the business of making/enjoying REAL music.

...  
> Even a smallish chamber ensemble has a very wide range of timbres at  
> its disposal, so it is not clear what a tape or synthesizer part has to  
> contribute, unless it introduces sounds very different from those made  
> by orchestral instruments.

Not clear to whom? What is this - a lecture in Monroe aesthetics?

...  
> I was reminded of what I  
> believe to be Chekhov's dictum that if one brings a cannon on stage one  
> should be prepared to fire it.

Or Fuck (with) it.

...  
> The 1995 International Computer Music Conference will be held at Banff,  
> Canada, September 3rd-7th. The 1996 conference will be held in Hong Kong, some time in August.

Who's hosting the 1996 one?

> The ICMA plans to continue the three-year cycle of Europe, America,  
> Asia/Oceania. There is some polite pressure to bring the conference to  
> Australia, presumably in 1999 (or maybe 2000). Is there an institution  
> willing and able to host it? The biggest problem is apparently  
> fundraising (about \$250 000).

The biggest problem is not raising the money. The biggest problem is finding someone willing to give up two years (minimum) of their life to provide a forum for this imperialist enterprise. Life is too short. What we need is more conferences/forums which encourage a wider range of issues

and that will break down the idea that there is one International CM Conference. That's where my efforts are going.

Anyway, acridity aside, thanks for the report Gordon. MAYCCAO.

from David Worrall  
Thu, 6 Oct 1994

Following my yesterday's post, Greg S. kindly wrote to me that (paraphrased) "before you get attacked for what are legitimate complaints about the incestuous nature of ICMA, would you consider posting ASAP a special disclaimer so that your remarks are not taken as an attack on Gordon.....your thanks to Gordon for his report at the end in my mind seemed insufficient to dispel the impression that Gordon \_ and not ICMA \_ was under attack..... Compared with John Fitch's review of ICMC94, Gordon's was very objective."

I thought I made it plain that it was ICMC that was the object of my invective but if it was not, please all ye hear me... GORDON IS NOT UNDER ATTACK. I appreciate the time and effort he has put in to keeping us all informed. I did say a few things about his opinions whch were only meant as a friendly tease about "good" art. Anyway if anyone (including Gordon) took offense, I'll consider my wrists (fingertips?) slapped.

cheers, drw

from Ben Goertzel via David Worrall  
Mon, 10 Oct 1994

>In regard to David Worrall's  
>  
>>a few acrid comments for discussion  
>  
>I say BRAVO!  
>  
>In my never particularly humble opinion, this kind of attitude is  
>exactly what computer music needs.  
>  
>I got into computer music from the industrial-grunge-noise-rock side of  
>things, which means I approach it with an ANYTHING-GOES kind of mentality.  
>  
>But as I listen to more computer music I find precisely  
>  
>>a lot of music that sounds un-eventfully similar  
>  
>We don't need to apply all these principles of aesthetics --  
>"The Human Touch," "unobtrusive technology," blah blah blah.  
>As we used to say in Philadelphia, fuck that weak shit. What is needed,  
>I think, is more of a passion for using the computer to make  
>interesting music. None of the rest of it really matters does it.  
>

>>What is needed is more conferences/forums which encourage a wider  
>>range of issues  
>  
>yes -- diversity fosters creativity. international conformity kills  
>creativity. nothing could me more obvious.  
>  
>this is not an attack on Gordon Monro, whose work & music I like.  
>I'm just pleased to see someone else (Worrall) voicing my own >opinions ... I guess I'm not a TOTAL iconoclast :-D...

>  
>--ben goertzel

from Gordon Monro  
Tue, 11 Oct 94

#### Controversy on oz-computer-music!?

Here are a few comments on the comments by David Worrall and Ben Goertzel on my comments on the 1994 International Computer Music Conference in Denmark.

First, some facts.

The 1996 conference will be in Hong Kong, sometime in August. It is being organised by Andrew Horner and Lydia Ayers at the Hong Kong Univ. of Science and Technology. Stephen Arnold's email address (was in 1993 anyway) stephen@music.gla.ac.uk> What is this "\*the\* language" bit? [\*the\* language of electro-acoustic music]

This is my recollection of what Trevor Wishart said.

Now, some non-facts...

> Oh dear! Let's make sure we eliminate "novelty or gimmick pieces".  
> Then we can get on with the business of making/enjoying REAL music. [David Worrall]

OK - a good question for debate. Does it matter if a piece of music is exciting the first time one listens to it, boring the second time, and irritating (or nauseating) the third time?

>> Even a smallish chamber ensemble has a very wide range of timbres at  
>> its disposal, so it is not clear what a tape or synthesizer part has to  
>> contribute, unless it introduces sounds very different from those made  
>> by orchestral instruments.

> No clear to whom? What is this - a lecture in Monro aesthetics? [David Worrall]

I think it is still a fact that a piece for clarinet and piano is "mainstream" for most people, but (present company

excepted?) a piece for clarinet and tape is not. This focuses additional attention and expectation on the tape part.

Should tape parts, electronics, etc, be treated as just another instrument?

To take an example, suppose we have a piece for piano, violin and vibraphone. Does it matter if the vibraphone part is pre-recorded and in a performance the pianist and violinist play along with the tape? If it does matter, why?

At the ICMC there was one piece that came close to a live ensemble plus pre-recorded vibraphone. Someone I was talking with argued that having the tape part changed the character of the piece completely. I didn't feel that. (This isn't quite fair to the piece, as the taped part didn't sound exactly like a vibraphone.)

> do you mean perfoaming? What a worn-out idea that the music is  
> somehow more human if there are carbon automatons scratching and  
> blowing! That's culcha for ya! [David Worrall]

I know David Worrall has a piece for tape and live performers (fl, clt, vln, vc, pno, perc.), though I haven't heard it yet. So tell us, David, what are the carbon automata doing in your piece?

> Also the standard of papers was not at all consistent and there were a  
> few bad-to-uneventful ones by "notables" (ie those in the "scene"). It  
> smelt of incest (pedophilia?) to me. [David Worrall, commenting on the 1993 ICMC] I don't think this is fair on the 1994 ICMC. Papers were submitted anonymously, and I am told that the anonymity was preserved rigorously during the refereeing process. I think that paper submissions for the 1993 ICMC were also anonymous.

> We don't need to apply all these principles of aesthetics --  
> "The Human Touch," "unobtrusive technology," blah blah blah.  
> As we used to say in Philadelphia, fuck that weak shit. What is needed,  
> I think, is more of a passion for using the computer to make  
> interesting music. None of the rest of it really matters does it. [Ben Goertzel]

\*Interesting\* music? Can this be an aesthetic judgement? As for the unobtrusive technology, this is a matter of fact. The technology \*was\* more unobtrusive at this year's ICMC. Whether it \*should\* be is another matter. I thought that it was maybe a sign that the music is slowly becoming more important than the technology used to make it.

> yes -- diversity fosters creativity. international conformity kills  
> creativity. nothing could me more obvious. [Ben Goertzel]

On reflection, I think that a lot of the greater diversity at this year's ICMC was due simply to the decision to use live ensembles. Since the live players were mostly not amplified, the music \*had\* to be quieter! I don't have definite opinions about a lot of these questions. (And I don't have any sort of clearly worked out aesthetics.) Also I don't feel that David and Ben are in one camp and I am in another - I don't have a problem with their statements.

> I got into computer music from the industrial-grunge-noise-rock side of  
> things, which means I approach it with an ANYTHING-GOES kind of mentality. [Ben Goertzel] Fine by me!

Anyway, time for someone else to have a say.

from David.Worrall  
Wed, 12 Oct 1994

>Controversy on oz-computer-music!?

NO you're kidding! not on oz-computer-music!

>> What is this "\*the\* language" bit?

>[\*the\* language of electro-acoustic music]

>>This is my recollection of what Trevor Wishart said.

>what do you think it means..?>Now, some non-facts...

> oh goody!

>> Oh dear! Let's make sure we eliminate "novelty or gimmick pieces".

>> Then we can get on with the business of making/enjoying REAL music.

>[David Worrall]

>

>OK - a good question for debate. Does it matter if a piece of music

>is exciting the first time one listens to it, boring the second time,

>and irritating (or nauseating) the third time?

>matter to whom? the listener, the composer? the .... sorry to appear pedantic but it's an important to be clear that all activity (incl. science) occurs within a cultural context and cannot be independent of it (when does nature stop calculating the value of pi?) The "piece" is informed by things external to "it": how does it relate to other works and where and in what psychological state the listener, for eg, hears the piece for example. Stockhausen once said "For me every attempt to bring a work to a close after a certain time becomes more and more forced and ridiculous. I am looking for ways of renouncing the composition of single works and - if possible - of working only forwards and of working so 'openly' that everything can now be included in the task at hand, at once transforming and being transformed by it; and the questioning of others for autonomous works just seems to me so much clamour and vapour." My point is that the use of machines in the process is affected by (among other things) the type of machines we use - as I tried to outline in my Synaesthetica '94 paper) and I wonder why these sorts of issues don't seem to be a focus at the \*International\*CMC.

>>> Even a smallish chamber ensemble has a very wide range

of timbres at

>>> its disposal, so it is not clear what a tape or synthesizer part has to contribute, unless it introduces sounds very different from those made  
>>> by orchestral instruments.  
>>> No clear to whom? What is this - a lecture in Monroe aesthetics?

>[David Worrall]

>>>To take an example, suppose we have a piece for piano, violin and

>vibraphone. Does it matter if the vibraphone part is pre-recorded and

>in a performance the pianist and violinist play along with the tape?

>If it does matter, why?

>

they're different "pieces" or ideas either more or less interesting. It is more or less interesting personally, but \*matter\* is a step on the path of conceptual imperialism

>> do you mean perfoaming? What a worn-out idea that the music is

>> somehow more human if there are carbon automatons scratching and

>> blowing! That's culcha for ya!

>[David Worrall]

>

>I know David Worrall has a piece for tape and live performers (fl, clt,

>vln, vc, pno, perc.), though I haven't heard it yet. So tell us, >David, what are the carbon automata doing in your piece? You're probably referring to \*Glass Games\* which I made in about 1981 or so when working at the CM Research Project at Melb Uni. This was b4 MIDI synthesis and is (I think) the first piece made in Aust using acoustic instr.'s and software synthesis. When the players they're in it, they play as carbon automatons: scratching and blowing! There are characteristics of music they produce which are different to those in the tape part but my point is, THEY ARE NO MORE OR LESS HUMAN!

>

>

>I don't think this is fair on the 1994 ICMC. Papers were submitted

>anonymously, and I am told that the anonymity was preserved rigorously

>during the refereeing process. I think that paper submissions for the

>1993 ICMC were also anonymous.

>

Perhaps. In order to have a paper accepted you have to have an abstract accepted. Which means the \*topic\* has to be acceptable. If it was \*papers\* that are rejected my argument would be different. Anonimity isn't my point. It's the narrowness of the conceptual base for the ICMC which I'm arguing makes it at odds with it's name. For example, how can a paper proposing a new (previously unwritten about) compositional technique using computers be rejected \*on the

---

basis of its abstract\* unless there is a set of selection criteria being applied that are not outlined to potential contributors? (Not to mention the '93 non-MIDI outrage!). If they (ICMCers) want to focus a particular meeting on a subset of topics then they should say so and not confuse advertising copy like "the human touch" with that. But this would work against the idea of \*the\* ICMC and the said conceptual imperialism.

....  
>> I think, is more of a passion for using the computer to make  
>> interesting music. None of the rest of it really matters does  
it

>[Ben Goertzel]

>  
>\*Interesting\* music? Can this be an aesthetic judgement?

>  
Yes, what's the problem with (personal) aesthetics?

>As for the unobtrusive technology, this is a matter of fact.  
The

>technology \*was\* more unobtrusive at this year's ICMC.  
Whether it

>\*should\* be is another matter. I thought that it was maybe a  
sign

>that the music is slowly becoming more important than the  
technology

>used to make it.

>Gordon, of course you're entitled to your observation. I was  
teasingly reminding that there is an assumption in your thought  
- namely that, at least in the past, music has been less  
important than the technology. I do not take that view neither  
do I consider it meaningful to isolate the music from the

technology used to make it. Didn't we learn that from Weber  
and Debussy....?

>

>On reflection, I think that a lot of the greater diversity at this  
>year's ICMC was due simply to the decision to use live  
ensembles.

>Since the live players were mostly not amplified, the music  
\*had\* to be  
>quieter!

>

>I don't have definite opinions about a lot of these questions.  
(And I

>don't have any sort of clearly worked out aesthetics.) Also I  
don't

>feel that David and Ben are in one camp and I am in another -  
I don't

>have a problem with their statements.

>I'm just interested in promoting communication and debate.  
Camp? What camp?

>Gordon Monroe

I've just returned from an Australian Music Centre board  
meeting. We're about to compile a Q'aire about their  
representation policy. I'll post this to theBB when it arrives.

Thought for the day: Whatever cannot be measured has tended  
to be systematically devalued.

cheers, drw

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## The CNMAT Ensemble CALL FOR SCORES

The Center for New Music and Audio Technologies  
(CNMAT)  
University of California, Berkeley  
1750 Arch Street  
Berkeley, CA, 94709 510-642-8731

The CNMAT Ensemble seeks scores involving live electronics  
and from 1 to 10 performers for its 95-96 concert season.  
Pieces with performers and tape will be considered only  
exceptionally, live electronics are preferred. The Ensemble is  
directed by Guy E. Garnett and will give a series of concerts in  
the San Francisco Bay Area.

Please send scores, and if available, tapes, to:

Guy E. Garnett  
Director, CNMAT Ensemble  
Center for New Music and Audio Technologies

1750 Arch Street  
Berkeley, CA 94709

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For further information, write to the above or call/email as  
below.

(510) 642-8731 (office/voicemail)  
(510) 643-9990 (CNMAT general)  
fax: (510) 642-7918  
[guy@cnmat.berkeley.edu](mailto:guy@cnmat.berkeley.edu)

# ISEA 95 Montreal

## International Symposium on Electronic Art

### September 17 - 24 1995

*This was taken from the MAX news group on 21-SEP-1994. The address for this news group is MAX@VMI.MCGILL.CA*

The International Symposium on Electronic Art will take place in Montreal Sept 17 - 24 1995. It will be the sixth edition of ISEA, which has been presented previously at Utrecht (1988), Groningen (1990); Sydney (1992); Minneapolis (1993) and in Helsinki in August, 1994.

#### ISEA 95 - WHO AND WHY

Artists, scientists, scholars and educators from throughout the world will come to ISEA 95 Montreal to report on and demonstrate the latest developments in the field of Electronic Art, focussing on the conference theme Emergent Senses / Sens emergents. They will discuss the emerging new art forms, the social, cultural and ethical implications of these developments, and the new partnerships that are being created between artists and technology.

#### THEME

The theme Sens Emergents / Emergent Senses captures several of the deepest currents now flowing through electronic culture. Through one eye, it points to the emergence of the new sensorium under construction by today's experimenters in media arts and science: new ways of combining seeing, hearing, and feeling in virtual environments, and new ways of extending our senses through electronic technology. Through another eye, "Emergent Senses" highlights the unfolding of meaning - the emergence of sense - from the characteristics of software-based art. Finally, "Emergent Senses" refers to the powerful attraction of biological and evolutionary metaphors in many fields today.

#### PROGRAMME

A conference including invited speakers, panel discussions, and artists' presentations. Exhibitions of new visual and media artworks in various museums and galleries. Workshops, on a variety of topics, including robot sculpture, virtual reality, copy-art, multimedia and hypermedia, network-art, etc. Music and performance art. An "electronic cafe". An evening of electronic cinema and on-demand screenings. A market for new media art productions, offering publications, artist books, tapes, CD-ROMS, etc. (Please see the attached forms for complete instructions on participating in the symposium.)

#### MONTREAL, A CITY OPEN TO THE WORLD

Montreal, the host city, sits at the crossroads of two cultures, French and North American. One of the oldest cities on the continent, it is a modern metropolis where all the great tendencies of art and lifestyles meet, and where the welcome is warm and the ambiance, distinctly "montrealaise".

#### CALENDAR

December 31, 1994 Deadline for proposals: Exhibitions, Performances, Network projects, Workshops.

March 1, 1995 Deadline for papers, panels and poster sessions.

April 24, 1995 Deadline for Electronic Cinema.

June 1, 1995 Deadline for the "new media market".

#### International Program Committee

#### COMITE INTERNATIONAL

Roy Ascott, Paul Brown, Hank Bull, Marc Caro, Sara Diamond, Anne-Marie Duguet, Vera Frenkel, Craig Harris, Theo Hesper, Derrick de Kerckhove, Robin King, Roger Malina, Simon Penny, Rejane Spitz, Minna Tarkka, Wim van der Plas, Gary Warner

#### ISEA95 Organizing Committee

#### COMITE D'ORGANISATION

Organizing Committee Louise Poissant (President), Henry See (Vice-president), Alain Mongeau (Secretary), Michael Century, Luc Courchesne, Louis-Philippe Demers, Greg Garvey, Denis Martineau, Eric Mattson, Bruce Pennycook, Don Ritter, Cynthia Beth Rubin

**ENDORSEMENT:** ISEA 95 Montreal is endorsed by ISEA (The Inter-Society for the Electronic Arts). ISEA 95 Montreal est parraine par ISEA (The Inter-Society for the Electronic Arts).

**ADDRESS** - To receive a copy of the application form, contact:

ISEA 95 Montreal  
307, rue Sainte-Catherine Ouest  
bureau 515B  
Montreal, Quebec  
Canada  
H2X 2A3  
Tel.: 514-990-0229  
Fax: 514-842-7459  
Email: [isea95@er.uqam.ca](mailto:isea95@er.uqam.ca)

#### CALL FOR PARTICIPATION

Conference Papers, Roundtables, Debates, and Artist Presentations

Artists, scientists, scholars and educators from throughout the

world will come to ISEA 95 Montreal to discuss the emerging new art forms, the social, cultural and ethical implications of these developments, and the new partnerships that are being created between artists and technology. ISEA Montreal is working to find innovative means of promoting this dialogue. Proposals from individuals or teams interested in presenting and coordinating discussions are welcomed for topics for roundtables, debates, and artist presentations, as well papers and panels.

Interested Individuals or Teams should send the following:

1. Application Form
2. A 500 word abstract of the proposal
3. A curriculum vitae
4. Technical Requirements Form

Submissions for Papers and Panels must include: 1) Application Form 2) A 500 word abstract of the paper or panel proposal 3) A curriculum vitae, 4) Technical Requirements form.

#### Poster Sessions

Poster sessions will provide an opportunity for artists to present and discuss their work, using video, slides or other forms of documentation. Maximum duration: 20 minutes. Submissions for Poster Sessions must include: 1) Application Form 2) The title and short description of the proposed session 3) A curriculum vita, 4) Technical Requirements form 5) Slides, video, sound or other audiovisual documentation. Workshops The Organizing Committee will present 6) workshops, in co-operation with Canadian companies and educational institutions. In addition, artists wishing to offer workshops are invited to submit proposals on topics of their choice. Submissions for Workshops must include: 1) Application Form. The title and short description (300 words) of the proposed workshop 2) A curriculum vita, 3) Indication of the number and level (beginning, intermediate or advanced) of enrollees. 4) Technical Requirements form 5) The duration of the workshop (1/2 or 1 day).

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FESTIVAL ISEA 95 will present a wide selection of exhibitions, concerts, performances, and network art projects, selected from the call from proposals.

#### Exhibitions (visual and media art)

The exhibitions are one of the central activities of the event, providing an opportunity for artists to present their most recent work, and for the public to enter into direct contact with works which frequently require a physical presence, as many new electronic works are interactive, engaging the spectator simultaneously as a user and a partner in the creative process. All works which demonstrate the creative use of the electronic media will be considered, regardless of medium. Submissions to the Exhibition Program must include: 1) Application Form 2) The title and short description (300 words) of the proposed work. 3) Slides, photographic, or tape (video/audio) documentation 4) Technical Requirements form 5) A description and diagram of the space requirements. Artists proposing to exhibit new work may submit examples of

completed projects. ISEA 95 is particularly interested in work that has not been previously exhibited.

#### Concerts and Performances

In coproduction with the ACREQ (Association pour la creation et la recherche electroacoustiques du Quebec). A varied program of musical and multimedia performance works will be presented, both in concert and using network transmission. Priority will be given to those which make a particular use of interactive media technologies and which involve new ways of collaboration between humans and machines.

Submissions to the Concerts and Performances Program should include: 1) The title and short description (300 words) of the proposed work. 2) A Curriculum Vitae 3) Audio or video recording of the proposed work 4) A detailed description of all technical requirement (stage size, sound equipment, lightning, electrical needs) and specification of all other material needs (accessories, dressing room, setup length, and all other particular needs). 5) A list of personnel required for the performance (performers, technicians)/ or credits of contributors to the recording. Artists of the accepted projects should expect to work closely with the Organizing Committee.

#### Electronic Cinema

Artists working in computer animation and video may submit works for exhibition at ISEA 95. All computer animation entries will be considered for recognition in the Ninth International Computer Animation Competition, organized by the Cite des arts et des nouvelles technologies de Montreal. Productions in the competition must contain at least 60% computer images, and entries must be sent directly to the Cite des arts, which will acknowledge receipt and provide further instructions. All other video productions will be considered for an on-demand screening program that will run continuously throughout ISEA 95. Submissions to the electronic Cinema must include: 1) A VHS version (PAL, NTSC, SECAM) for jury pre-selection 2) Credits and technical documentation: contributors, duration, master format 3) A curriculum vitae. All entries must be sent exclusively by mail, and marked "No Commercial Value, Film for A Festival". Network Art/ Other Projects Artists who wish to present a project that does not fit in one of the previous categories are invited to complete a form including : 1) The title and short description of the project (including audio and visual documents or any other material necessary to the good understanding of the project) 2) A curriculum Vitae 3) Technical Requirement form 4) A detailed description of the project and its dimensions 5) Any relevant document.

#### Marketplace for New Arts

The Marketplace for New Arts will offer an opportunity for all the artists involved to put their creations at the disposal of each other and the general public in Montreal. At once a bookstore, video center, art gallery, music store, software and CD-ROM store, a multi-media demonstration center, the Market is the perfect place to browse and encounter the avant-garde; it is the prototype for a new kind of arts and culture marketplace. Artists wishing to participate in the Marketplace must deposit their works for the duration of the event. Profits

on sales will be split between artists and the organization of the Symposium. People who would like to deposit their publications are invited to complete a participation form including : 1) Title and short description of the product; and 2) Format of the publication (CD-ROM, CD-I, CD-Audio, videodisk, etc.).

#### BILINGUALISM

All proposals may be submitted in English or in French. Simultaneous translation (French-English) will be provided for the keynote speakers, paper and panel presentations.

#### DEADLINES

Applications must be received by the following dates:  
December 31, 1994 Exhibitions, performance/music,  
network art and workshops.  
March 1, 1995 Papers, Panels, Poster sessions. April 24,  
1995

Electronic Cinema. June 1, 1995 Marketplace of New Art.

#### ADDRESS

For all submissions:  
(except the International Computer Animation Competition)

#### ISEA 95 Montreal :

307, Sainte-Catherine West,  
bureau 515B, Montreal,  
(Quebec) H2X 2A3  
Canada

Telephone: 514-990-0229, Fax: 514-842-7459  
Email: [isea95@er.uqam.ca](mailto:isea95@er.uqam.ca)

#### International Computer Animation Competition:

c/o Mario Tremblay  
La Cite des arts et des nouvelles technologies de Montreal :  
15, rue de la commune West  
bureau 101, Montreal (Quebec) H2Y 2C6  
Canada

## MAX upgrades to version 3.0

*OPCODE releases the newest version of MAX 3.0. This message was taken from the MAX news group.  
The appropriate form is at the end of this news letter*

Greetings, MAX Users:

Opcode is preparing the release of MAX 3.0 and we need your help. Hopefully, the MAX listserv users can provide us with some valuable information.

#### - FTP SITES -

Opcode will include a list of FTP sights with the MAX 3.0 documentation. If you know of any good FTP sites for MAX patches/objects, please email us these addresses (along with a directory location for the MAX related files). Since this information will be included with each MAX package, it is important that the site be a permanent source.

#### - USER OBJECTS AND PATCHES -

There are already a number of user-created patches and objects which will be distributed with MAX 3.0. However, if you have authored some objects or patches which may be of interest to us, there is still some time for them to be included. Just send us the files along with any necessary documentation (a HELP file would also be nice) - please hurry though. If you are sending attached files via email, be sure to BinHex them first.

#### - MAX DEVELOPER LIST -

Opcode will also include a list of MAX developers with the 3.0 package. This will provide contacts for MAX users who are seeking assistance in a specific development area. If you are interested, please complete the form (on the following page) and send it back to us ASAP - you can use FAX, mail, or email. However, be aware that this information will be published and go out to a large number of users (if you do not feel comfortable with providing your telephone numbers, an email address should suffice).

With your help, we look forward to a great release of MAX 3.0!

Thanks in advance,

Greg Thomas  
Opcode Systems, Inc.  
3950 Fabian Way Suite 100  
Palo Alto, CA 94030  
Phone 415/856-3333  
FAX 415/856-3332  
Email [greg\\_thomas@opcode.com](mailto:greg_thomas@opcode.com)

# II Brazilian Symposium on Computer Music

JULY 30 - AUGUST 02, 1995

\*\*\*\*\*

Gramado, RS, BRAZIL

\*\*\*\*\*

## PRELIMINARY CALL FOR PAPERS AND COMPOSITIONS

### The Symposium:

The Second Brazilian Symposium on Computer Music will be held in Gramado during the Annual Congress of SBC (Brazilian Computer Society). Gramado is on the mountains of the southern Brazilian state of Rio Grande do Sul, near Porto Alegre, the capital. Gramado is culturally influenced by the German immigration in the region and is characterized by its peculiar bavarian architecture. The temperature in Gramado at this time of the year can be very low, which provides excellent atmosphere for meetings and festivals.

The first symposium, held in August '94, in Caxambu, went very well. There were 38 papers selected for presentation and 40 compositions selected for the concerts, from submissions from all over the world. Undoubtedly, this was a significant point of departure for the formation of a substantial computer music community based in South America.

The symposium is organized by NUCOM, the Computer Music Commission of SBC. The objective of the symposium is to present ongoing research on the specification, design, implementation, and evaluation of computer systems for music, as well as to present novel computer music compositions. The symposium is primarily aimed 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, anthropology, physics, and education. Also there will be tutorials for beginners and advanced computer musicians.

Researchers and composers of any nationality are most welcome to submit papers, tutorial proposals, and compositions for the concerts of the symposium. All selected papers will appear in the proceedings edited by SBC and selected compositions will be considered for the recording of a CD that forms part of the proceedings and will also be broadcast by the university's radio station in Porto Alegre.

### Main Areas of Interest:

- . Acoustics, Diffusion, Sonorization
- . Artificial Intelligence and Music
- . Audio Hardware Design
- . Computer Aided Music Analysis
- . Psychoacoustics and Cognitive Modeling
- . Real-time Interactive Systems
- . Signal Processing and Sound Synthesis
- . Studio Reports
- . Computer Aided Musical Education

### . Systems and Languages for Composition

In an attempt to fill in the philosophical gap we noticed in the last symposium between musicians and computer experts, this year we also encourage experienced composers to submit reports on computer aided composition. These reports are to be primarily aimed at a systematic discussion of the role of the computer in his or her own methods of composition.

Other topics not listed above will be considered by the program committee.

### Program Committee, Chairman (Address for submissions):

Eduardo Reck Miranda

II Simposio Brasileiro de Computacao e Musica  
Universidade Federal do Rio Grande do Sul (UFRGS)  
Caixa Postal 15064  
91501-970 Porto Alegre, RS  
BRAZIL

Fax: + 55 51 336 55 76

E-mail: emiranda@inf.ufrgs.br

### Papers and Tutorials Committee:

Aluizio Arcela - University of Brasilia, Brazil

Carlos Cerrana - LIPM, Argentina

Conrado Silva - University of Brasilia, Brazil

Geber Ramalho - University of Paris VI, France

Janary Oliveira - Federal University of Bahia, Brazil

### Music Composition Committee:

Celso Loureiro Chaves - Federal University of Rio Grande do Sul, Brazil

Francisco Kropfl - LIPM, Argentina

Jose Augusto Mannis - University of Campinas, Brazil

Mauricio Loureiro - Federal University of Minas Gerais, Brazil

Robert Willey - University of California, San Diego, USA

### Deadlines and Important Dates:

March 30, 1995 - Deadline for postage of abstracts

March 20, 1995 - Deadline for postage of compositions

May 20, 1995 - Notification of acceptance

June 22, 1995 - Final camera-ready

### Further Information about the SBC Congress:

Lourdes Tessinari  
Setor de Eventos - Instituto de Informatica  
Universidade Federal do Rio Grande do Sul  
Caixa Postal 15064  
91501-970 Porto Alegre, RS BRAZIL  
Tel: +55 51 336 83 99 r: 6166 or 6158  
Fax: +55 51 336 55 76  
E-mail: conf95@inf.ufrgs.br

#### Paper Submission:

Submissions of abstracts in English (preferred), Portuguese or Spanish,  
via E-mail (ASCII format) or Fax to the program committee's chairman  
(in Porto Alegre, to the address above).  
Abstracts should not exceed 300 words. E-mail is preferred.

#### Music Submissions:

Music submissions should be sent via air mail to the program committee's chairman (in Porto Alegre to the address above). Works will be played in concert from DAT or CD, but may be submitted on cassette for the application process. Composers who intend to submit works involving live performance should check for the availability of equipment and performers before submission. Pieces not exceeding 12 minutes are preferred. It is essential that all composers also send a brief program note (up to 100 words) for the brochure of the concerts, including at least the name of the piece, date of composition, studio and equipment, plus a brief biography (in

English, Portuguese or Spanish). Submissions without this information will not be considered.

Pieces for tape only whose duration does not exceed 8 minutes will be considered by the committee for the symposium's CD, which will be distributed to all participants of the SBC conference, as part of the proceedings. Composers of longer pieces may wish to also submit excerpted versions for the recording. Pieces which require performers will be considered if a version is supplied which includes the live part.

It is suggested that once the material has been posted, composers give us a note by e-mail or FAX in order to inform us of the submission.

#### Tutorials Submission:

For the submission of tutorial proposals, please get in touch with Conrado Silva for further information.

Conrado Silva  
Colina Bl.F Ap. 10570910-900  
Brasilia  
Tel: +55 61 349-8978  
E-mail: conrado@guarany.cpd.unb.br

## Csound ftp sites

from John Fitch <jpff@maths.bath.ac.uk>  
This file is on [ftp.maths.bath.ac.uk](ftp://ftp.maths.bath.ac.uk) in pub/dream

Built versions of Csound for those without C compilers etc are available as follows:

Atari  
[ftp.maths.bath.ac.uk:pub/dream/\\*\\_itt](ftp://ftp.maths.bath.ac.uk:pub/dream/*_itt)

MAC  
[cecelia.media.mit.edu:pub/Csound/csbeta/Csound.hqx](ftp://cecelia.media.mit.edu:pub/Csound/csbeta/Csound.hqx)  
MAC(with background processing)  
[ftp.latrobe.edu.au:pub/music/CsoundRB\\*.sit.hqx](ftp://latrobe.edu.au:pub/music/CsoundRB*.sit.hqx)

NeXT  
[ftp.cs.orst.edu:/pub/next/binaries/sound](ftp://cs.orst.edu:/pub/next/binaries/sound) (bundled with Csnd.app v1.1b)

PC/286-DOS  
[ftp.maths.bath.ac.uk:pub/dream/csound\\_286\\_fpt.zip](ftp://ftp.maths.bath.ac.uk:pub/dream/csound_286_fpt.zip)  
PC/286-DOS  
[ftp.maths.bath.ac.uk:pub/dream/csound\\_286.zip](ftp://ftp.maths.bath.ac.uk:pub/dream/csound_286.zip)

PC/386-DOS  
[ftp.maths.bath.ac.uk:pub/dream/csound\\_386\\_fpt.zip](ftp://ftp.maths.bath.ac.uk:pub/dream/csound_386_fpt.zip)

PC/386-DOS  
[ftp.maths.bath.ac.uk:pub/dream/csound\\_386.zip](ftp://ftp.maths.bath.ac.uk:pub/dream/csound_386.zip) PC/486DX-DOS

[ftp.maths.bath.ac.uk:pub/dream/csound\\_486.zip](ftp://ftp.maths.bath.ac.uk:pub/dream/csound_486.zip)

PC/Windows  
[ftp.maths.bath.ac.uk:pub/dream/wcsound.zip](ftp://ftp.maths.bath.ac.uk:pub/dream/wcsound.zip)

PowerPC  
[beef.med.cornell.edu:pub/Csound.ppc.hqx](ftp://beef.med.cornell.edu:pub/Csound.ppc.hqx)

SGI  
[ftp.maths.bath.ac.uk:pub/dream/SGI/\\*](ftp://ftp.maths.bath.ac.uk:pub/dream/SGI/*)

SUN  
[ftp.maths.bath.ac.uk:pub/dream/SPARC/csound](ftp://ftp.maths.bath.ac.uk:pub/dream/SPARC/csound)

Manuals and sources are in the MIT and Bath sites.

# JOB OFFER

*This was placed on oz-comp by David Worrall on Thurs, 6th October. It is from Gary Nelson of Oberlin University, Ohio.  
email: FNELSON@OCVAXA.CC.OBERLIN.EDU*

## NOTICE OF FACULTY VACANCY IN ELECTRONIC AND COMPUTER MUSIC

The Conservatory of Music at Oberlin College invites applications for a continuing, full-time, tenure-track, position in the Technology in Music and Related Arts (TIMARA) Department beginning in the 1995-96 academic year. The Conservatory of Music is Americas oldest school dedicated to the training of professional musicians. Founded in 1865, it was the first college-affiliated conservatory in the United States. Its students are enrolled in undergraduate programs leading to the Bachelor of Music in performance, composition, music education, music history, historical performance, electronic and computer music, and jazz studies; graduate programs leading to a master of music in conducting, historical performance, or opera theater; master of music education; or master of music in teaching. Performance and artist diplomas are also offered. The Conservatory and College have earned national reputations of excellence based upon the quality of the student body (drawn from every state in the union and abroad), fine faculty, and excellent facilities.

The TIMARA Department offers a four-year curriculum leading to a Bachelor of Music degree in electronic and computer music. There are two full time teaching faculty, a full time music engineer, and a part time teacher of studio recording. There are 25-30 majors.

The individual appointed will have general responsibility for and will perform the following specific duties:

1. Teach courses in analog and digital sound synthesis, computer music software, multi-track recording technique, and other areas related to multimedia.
2. Teach composition focusing on technological media.
3. Participate in committees, meetings and activities of the TIMARA Department and the Conservatory of Music.
4. Advise students on artistic, academic, and career matters.

Qualifications include:

1. A doctorate in composition or computer music with a body of compositions and research that represents a substantial engagement in the creation of new works.
2. Demonstrated experience and achievement in digital and analog signal processing, sound synthesis, and computer programming.
3. Experience with interactive computer music systems and

digital instruments in composition and performance.

4. Experience with computer graphics, animation, and video techniques.
5. Teaching experience in electronic and computer music.
6. A commitment to electronic and computer music as the principal focus of a professional career in musical composition.

Interested persons should submit credentials to Karen L. Wolff, Dean, Oberlin College Conservatory of Music, Oberlin, Ohio 44074. All credentials should be received by November 15, 1994 to ensure consideration. Those received after that date will be considered until the position is filled. The appointment will be made at the rank of Assistant or Associate Professor. Salary will be commensurate with experience and qualifications.

David Worrall  
Foundation Head, Australian Centre for the Arts & Technology  
Institute of the Arts, Australian National University,  
Canberra.

# Australian Computer Music Association, Inc.

## Annual General Meeting

4:00 pm Saturday 19th November 1994

Conservatorium of Music  
Melbourne University  
Parkville, Victoria

### Agenda

1. Attendance
2. Confirmation of minutes
3. Matters arising from the minutes
4. Reports from the committee
5. Discussion of proposed new committee structure
6. Election of committee members for 94-95
7. Date of next meeting
8. Other business

It has been proposed by the present committee that a reorganisation of the ACMA committee would be appropriate to more adequately meet the demands of a national, project-based organisation such as ours. The proposal has been for a move away from the traditional association committee structure consisting of President, Vice-President, Treasurer and Secretary, to a pragmatic and project-based structure with more positions specifically created for particular projects or activities. The suggestions to date have been, in no particular order:

- President
- Treasurer
- Secretary
- Publications
- Recordings
- Concerts
- International Liaison
- Education
- Conferences
- Funding
- National Liaison
- State representatives

This structure has been proposed to more evenly distribute the workload and provide a clearer responsibility for each activity undertaken by the organisation. A given individual could be responsible for more than one of these functions. If you have any other suggestions or thoughts on this matter, or would like to nominate for a committee position, please contact a member of the existing committee. The current suggestions are very open to changes, and we would be delighted to hear from you. Nomination and proxy forms are provided at the back of this issue.

### 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

### 1994 ACMA Committee

President: Alistair Riddell  
E-mail: amr@farben.latrobe.edu.au  
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Treasurer: Jane Walker  
ph: (03) 801 9700 (W)

Secretary: Thomas Stainsby  
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