EDITORIAL

Welcome to the **25th** issue of **Chroma**, the occasional newsletter of the Australasian Computer Music Association. And with reports from our members in Singapore and New Zealand, as well as articles and reviews from Australia, our focus is well and truly on computer music in the wider Australasian region. We start off with the schedule for this year's ACMC in Wellington, which is happening between July 7th-10th, at Victoria University of Wellington, organized by the tireless John Young, Philip Brownlee, and Co. And a reminder, in accordance with our practice of the past few years, the **ANNUAL GENERAL MEETING of ACMA** will be held at the ACMC conference in Wellington. New officers will be elected, and policies discussed. We then proceed to an interview with Sydney's Greg Schiemer, where he compares ideals from the 70s with the realities of today, talking about his work with self-made computer music systems. Tom Fryer, from Melbourne, another leading practitioner of the do-it-yourself computer music aesthetic, reports on his MIDI guitar controller project, an article inspired by a wisecrack of mine. When am I going to learn to keep my big mouth shut? Seriously, it's a very interesting look at a very complex home-made computer music system, and Tom's performances on it are engrossing to both listen to and to watch. Marc Chesterman, from Auckland, reports on his installations Never Look Up and city-tape-transfer, and the CD (now available from him directly) that resulted from them. Lulu Ong reports on Channel Hopping, an event currently happening in Singapore, and following on the tremendous success of Immersion, five packed days of computer music events organized by Philip Samartzis of RMIT, Melbourne, Philip Brophy reviews two new CDs by Samartzis. Unfortunately, for reasons of time and space, my own mini-reviews of 35 new and vitally exciting electroacoustic CDs you just can't possibly afford to live without (including new CDs by David Doty, Robert Ashley, Herbert Brun, Garth Paine, Susan Frykberg, Ernie Althoff, Mary Lee Roberts, Unamunous Quorum, Giuseppe Englert, Amanda Stewart, Stelarc and Rainer Linz, Elwyn Dennis, Raoul Hausmann, Gary Verkade, Salvatore Martirano, and others) has had to be postponed until our next issue, appearing around October. Join us then for that, as well as for reports from the Wellington conference, and other articles.

-Warren Burt, acting editor

ACMC 99
VICTORIA UNIVERSITY OF WELLINGTON

SCHEDULE OF EVENTS

-CONCERTS-

Concert 1 - 1.15pm, Wed 7 July
Michael Norris: Chimaera
Graham Hadfield: Io
Chin-Chin Chen: Points of Arrival
C. Matthew Burtner: Fern
Bret Battey: On the Presence of Water
Elainie Lillios: Arturo

Concert 2 - 7.30pm, Wed 7 July
Paulina Sundin/Jens Hedman: Currents
Frances White: Lesser Celandines
John Emlsy: Soft Dawn Over Whispering Island
Philip Brownlee: Mists and Voices
Craig Walsh: Pipeline Burst Cache
Dennis Miller: Vantage Point

Late concert 1 - Wed 7 July, 10pm
Terry McDermott: Exstatic

Concert 3 - 1.15pm, Thurs 8 July
Rajmil Fischman: Kol Hatorr
David Hirst: Mon Dieu
Benjamin Thigpen: Step, Under
Jonny Marks: Concave
Maggi Payne: Apparent Horizon
Andrew Brown: Travail du Jour
Peter Batchelor: Velocity

Concert 4 - 7.30pm, Thurs 8 July
John Deusenberry: Wave Break
Miriama Young: Caul
Francis Dhomont: Phonurgie
Adrian Moore: Foil_Counterfoil
Brigid Burke: Allure
Jonty Harrison: Streams

Late concert 2 - 10pm, Thurs 8 July
Ian Whalley: Ga No Mita Mono (What the Moths Saw)
Robert Dow: Season of Mists
Elizabeth Anderson: Chat Noir
Hans Tutschku: Extrémités Lointaines

Concert 5 - 1.15pm, Fri 9 July
Pete Stollery: Peel
Gordon Monro: Lament Over Jerusalem
Dugal McKinnon: Horizont im Ohr
Robert Douglas: Lituus
Guto Caminhoto: Paisagen Londrienses 1
Warren Burt: Double Dachshund Memory Trace
Ian Fredericks: Violins in Space

Concert 6 - 7.30pm, Fri 9 July
Chris Cree Brown: Iron Pebbles and Gold Dust
Tim Kreger: Automatic
Thorin Kerr: "---"

Mathew Adkins: Melt
Todor Todoroff: Voices Part 1
Rodrigo Sigal: Dolor en Mi
Simon Rae: Child Of Europe

Late concert 3 - 10pm, Fri 9 July
Elsa Justel: Alba Sud
Barry Truax: Sequence of Earlier Heaven
Robert McKay: Environs
Yee On Lo: Portrait of Timbre as a Wild Wood Dove

Concert 7 - 10.30am, Sat 10 July
Francesco Giomi: Agnaby
Brian Bevelander: A Letter from Nathaniel Giles
Tom Williams: Interference
Allan Schindler /Stephanie Maxwell: Outermost
David Shepherd: Similitude

Concert 8 - 3.30pm, Sat 10 July
Andrew Lyons: Schwarz Child
Diane Thome: Bright Air, Brilliant Fire
Sean Bridgeman, Thorin Kerr, Greg Schiemer: Watch this space
Jon Drummond: Zephyr
Scott Wilson: Blow
Allyson Newman: African Soundscapes
Lisa Meridan-Skipp: Without a Sound

Concert 9 - 6pm, Sat 10 July
Rob Smith: Essential Torque
Norman Skipp: Threni
Damien Lock: Sift
Anthony Hood: Humidity 1
David Prior: An Die Materie
Joseph Hyde: Zoetrope

Installations
Garth Paine: Map 1
Jessie Ginsborg-Newling: Inundare
Reynold Weidenaar: Magic Music from the Telharmonium: The Story of the First Music Synthesizer

-PAPER SESSIONS-

Session 1: Wed 7 July, 3:30 PM
Andrew R. Brown: Tools and Outcomes: computer music systems and music directions
Tim Kreger: Real-time Cellular Automata Filters Implemented with Max MSP
Damien Lock: Designing a music composition system in an "open source" environment
Ian Fredericks: SPACE_N

Session 2: Thu 8 July, 9:00 AM
Densil Cabrera: The Size of Sound: Auditory Volume Reassessed
Gordon Monro: Some sound modifications using wavelets
Ian Kaminskyj: Multidimensional Scaling Analysis of Musical Instrument Sound CQT Spectra

Session 3: Thu 8 July, 10:45 AM
Terence McDermott, **Ross Bencina**: The use of Dynamic Nested Space in the Acousmatic Presentation of Electroacoustic Work
Oliver Hancock: Music with the Gestural Qualities of Environmental sounds: Using a Nonlinear Dynamic System as a Physical Metaphor
Warren Burt: The Spectacle and Computer Music: A Critical Assessment

Session 4: Fri 9 July, 10:45 AM
Mathew Adkins: Acoustic Chains in Electroacoustic Music
Michael Norris: Reinstating Interpretation: the status of analysis in an electroacoustic context

Session 5: Fri 9 July, 3:30 PM
Andrew Lyons: Time as Space: the spatial/visual abstraction of music in Schwarz Child
David Worrall: Cyberspace and Sound
Allyson Newman, **Jessie Ginsborg-Newling**, **Sean Bridgeman**, **Greg Schiemer**: Composing with the Lake 3D audio system
Jon Drummond: Visualisation of Auditory Space

Session 6: Sat 10 July, 9:00 AM
Greg Schiemer, **Narayan Mani**, **Siri Rama**: "Shantivanam 2": interactive performance using an audio signal processor
John Elmsly: Beyond the Sounds....

Studio Reports

Anthony Hood: Sydney Conservatorium of Music: Studio Report
Martin Wesley-Smith, **Greg Schiemer**
Studio Report, Electronic Music Studio, Sydney Conservatorium of Music

GREG SCHIEMER

An Email Interview with Warren Burt
May-June 1999
gregs@conmusic.usyd.edu.au

This interview starts off with a bit of nostalgia - the lyrics of a political song that Greg Schiemer, one of Australia's leading electronic music composers, rote in 1977. From that point, we then turn our attention to the present, seeing if the concerns reflected in that song are relevant today. -Warren Burt

WB: Greg, in 1977, you wrote the song "Lo-Cholesterol Amateur" and recorded it, with yourself on the banjo, on a 45 rpm record. Here are the lyrics to that song:

Verse 1

(twenty) Five years ago I tried to go pro'
But as you plainly see I failed!
But now I can say I've tried a new way
And better fortune has prevailed (I feel like)

Refrain 1

I wanna be an amateur, a little ol' amateur
I wanna be just what you see, a little ol' amateur
Chuck out them standards, you can't go wrong
And join with me as I sing this song and sing
I wanna be an amateur, a little ol' amateur

Verse 2

A slave has a price, it's not very nice
But that's the reason money 's spent
So if you work and fret to a deadline they set
You'll only live to pay the rent
For all of creation was meant to be free
And all good ideas are public property
But you'll never lose your identity
If you become an amateur (and sing)

Refrain 2

I wanna be an amateur, a little ol' amateur
Why don't you be and join with me, a little ol' amateur
Walk out of art's prison and join the throng
Don't write a concerto, have a go at a song!
But make sure it's somethin' we can all sing along
Like a little ol' amateur

Verse 3

If you go all the way in the role that you play
The role will only nail you down
So if you wanna' sing just do your own thing
And folks'll spread the word around
Diddle-de doo-dle doo-dle doo-dle doo-dle doo-dle-dy doo
I've run out of words (and near the end too!)
But if you'd like it finished, I'll gladly let you
If you become an amateur (the way)

Refrain 3

I wanna be an amateur, a part-time amateur
If you don't make a star, go the way that you are
A little ol' amateur
Art is no complete answer for trouble an' strife
Not a full-time profession or a substitute wife
Or a ball an' chain for the rest of your life
When you're a part-time amateur (sing ya buggers)

Refrain 4

I wanna be an amateur ...
(like refrain 1)

One more time

Lo-cholesterol amateur.

WB: Now, 22 years later, you are, and have been for many years, a lecturer at the New South Wales Conservatorium, and have just completed a PhD in Electronics where you discuss your designs for several generations of the MIDI Tool Box, personal portable computer music devices. To some, this might seem like the essence of high professionalism. But to me, there is still a strong element of what I might term "radical amateurism" about your work. Do you agree with that? And just what would that term "radical amateurism" mean to you?

GS: Do you mean in the sense that being 'amateur' represents being committed to something other than the pursuit of one's own self-interest instead of an artistic pursuit where sometimes the most important yardstick is the advancement of one's professional career?
'Radicalism', well, I think this is still missing in so much serious contemporary music. While some music is promoted as "new music", you could hardly say it's radical. Today, "new music" usually means anything written in the last 40 years, and usually this is a selection made to make performers look hip. Sometimes this includes performing a piece for soloist and tape or live electronics. Rarely is there any attempt to address the issue of obsolescence inherent in works which depend on electronic technology. This is a problem usually left to those -- usually a handful of composers -- who have made an effort to come to terms with technical problems inherent in new technology. There are also a growing number of performers working with electronics, such as Graeme Leak and Nigel Westlake -- who don't need another composer to tell them how to relate to their electronic environment. As computers become more ubiquitous and get faster, the composer and performer will inevitably become one and the same person. I see electronics therefore, not as some new family of instruments in the on-going evolution of the orchestra, but as a radical new musical paradigm.
Let me approach this another way. I was initially self-taught both in composition and in electronics. I nevertheless owe a great deal to the teaching of Peter Sculthorpe and David Ahern, just as I owe much of what I learned in electronics to Phil Connor (who designed the Harmoniac synthesiser in the late 70s) and Arthur Spring (who designed the Vernus electronic organ, and invented an electric car in the 40s). It was not until I acquired the skills of a computer technician that my interest in creating music and electronics gradually began to merge. This began in the early 70s largely as a result of collaboration with people outside the discipline of music, most notably with choreographer Phillipa Cullen. My initiation into the realities of electronics began as collaborator on her theremin dance projects which happened between 1972 and 1975. These skills also allowed me to earn my living by means other than music. Earning my living in that way has meant freedom from what I call the dork factor ie. being called a "budding young composer" or being expected to become "another Sculthorpe".
A revolution has happened in music ever since the invention of the semiconductor. One of the

things I refered to in my thesis (in a chapter entitled "The emerging tradition of composer/instrument- builders") was the way this consumerised electronics. Low voltages made it safer and mass-production made it cheaper for amateur electronics enthusiasts (including a whole new wave of experimental musicians like David Tudor, Gordon Mumma, David Behrman, Nam June Paik & Max Neuhaus and others) to get their hands dirty in the process of inventing/learning what ultimately has become a whole new musical craft, the craft of analogue synthesis. Each of these analogue instrument builders were able to pursue their own artistic goals without the need to steer the musical development of their systems along traditional lines. Similar developments happened later with composers who developed the first software instruments such as Jean-Claude Risset, John Chowning, David Jaffe and others, instruments that have since become vital to the development of computer music.

The field was open to anyone who had the commitment to address their own musical question by developing procedures for realising their ideas (ie. the circuitry or the software code). There has been a major paradigm shift in music from a technology based on paper to a technology based on silicon. The survey of the work of many other composer/instrument-builders who have been part of this shift -- and there are probably thousands more who could have been included - has provided a new way of understanding my own work since 1972. I decided to complete my Ph.D in electronics rather than music. I did this because thought there would be more possibility of being able to articulate the multi-disciplinary role of composer/instrument-builder who works with electronics.

WB: So from your reply, you seem to feel that the field of music, or more specifically academically-based music, hasn't opened itself up widely enough to multi-disciplinary thinking. Is that true ?

GS: I suppose that is the way I feel but the problem is much more than that. The term multi-disciplinary has become just another buzz word, part of the administration-speak that, especially in the arts, substitutes for vision in this decade of higher education reform. The problem is that multi-disciplinary thinking in music seems to be driven from the wrong end: a case of what users must put into the recipe rather than a recipe that the user invents or discovers through the available materials. Without this sense of discovery, composers or performers become complacent. If the musical agenda in academia is set by musicians, it is largely driven by those who are better at reworking and disguising the same old 'musical' formulae.

If you don't believe this, get an ARC grant that has the potential to really address the future of music in Australia by linking local engineering innovation with the training of composers and others who come to this field from other non-music backgrounds. Then watch some of the decisions made by those running the institution as it attempts to write electronic music out of the recent history of Australian music.

WB: This seems to be typical of many academic institutions in Australia at the moment. The closure of La Trobe Music, the downgrading of computer music teaching positions in more than one institution to subjects taught by graduate students or even technicians....

GS: Yes, at the Sydney Conservatorium this sort of thinking was reflected in the recent appointment of a musicologist, not a composer, and especially not an electronic-music composer, to run the composition department while the head of composition went on leave.

So in answer to your question has "academically-based music opened itself up to multi-disciplinary thinking", then I'd think I'd have to say "no". And in many of the decisions which involve the very future of music in academia those of us who are literate in some of the technologies which over the past few decades have transformed the musical status quo, have not been involved in the decision making. A case of new wine in old wine-skins, or mutton dressed up as lamb.

WB: I agree with what you say about electronics providing a new paradigm, or maybe being an essential part of the shift in paradigm in the art-music sphere from the composer to the composer-performer.But it seems that in some cases, for example, like learning to write VST plugins, (or designing a single board microprocessor for MIDI information), there is an enormous amount of work to do before you can get on to making music. In other cases, like using "kit" software like MAX, Kinetic Music Machine, Building Blocks, or any of the newer patchable computer synthesizer real-time software, the learning curve might not be so steep. But how do you see electronics contributing to the possibility of as you put it in your song, "not writing a concerto, but having a go at a song (and making sure it's something we can all sing along)"?

GS: Yes, there was a considerable amount of work and time that I spent just building the MIDI Tool Box or writing the ROM library of routines which drive it. But from my experience, it's not possible in the way you have suggested to completely isolate the time I spent before getting down to write music from the time I spent writing music. This separation is too tidy. I'd invariably discover in the middle of working out a routine specifically for a new algorithmic composition, that the routine should be implemented in such a way that it is included in the ROM library. That way I might avoid writing the same routine from scratch next time.

I'd like to believe it has been worthwhile spending time thinking about how to fashion new means from very raw materials -- ie. the instruction set of a generic microcontroller. Other composers besides myself – like Jon Drummond, to name but one -- have had new horizons opened up through working with the MIDI Tool Box. I've also had new horizons open through the MIDI Tool Box, encounters with some of the most creative people in the field of Radioastronomy who built the A4 audio signal processor, collaborative encounters with musicians like Graeme Leak and later Krishna Kumar and Narayan Mani.

At the same time I can see the value of doing things faster or using means that are easier to use than the MIDI Tool Box. There is also another side to the ease of using more user friendly real-time software. With new technology the learning curve is always steep, for someone else, if not the composer. It all depends how much a composer wants to learn. Other more user-friendly systems have made their mark because they don't demand much learning. Not wanting to learn anything can be the downside of working consumerised music technology. It is having ready access to lots of new ideas that is the upside.

"Don't write a concerto, have a go at a song, But make sure it's something we can all sing along" ? The egalitarian sentiment of those lyrics is very close to the musical ideals of Cornelius Cardew, one of my earliest and enduring mentors and someone whose ideals are easily misrepresented as being anti-technology. I see no incompatibility between the egalitarian music-making of Cardew and my involvement in the development of the MIDI Tool Box. Both activities serve to undermine the position of an entrenched elite. And while I have developed a few esoteric programming skills, these skills have quickly been made obsolete by the advance of the same technology that brought them into being. Nevertheless, they were skills which I acquired by trial and error -- true to the ideals of amateurism.

WB: Computer music was in the academies for years because of the expense of the equipment. Your work during that time was showing how cheaper, more accessible tools could be used for musical exploration. Now, in Australia at least, computer music in the academies is under
serious threat and more and more it's being forced out of them into the rest of the world. At the same time, the equipment used for it is getting cheaper and cheaper. So more people are going to have the equipment to make it, but not have anything to do with academia. I just spent most of a recent weekend reading British music and technology magazines which dealt with jungle, drum'n'bass, trip-hop, etc. styles. What depressed me most about these magazines was the assumption of the editors of the absolute dominance of business considerations in this music. And while recognising the absolute centrality of digital technology in the commercial sound industries, it seems to me that if computer music is not simply to go from academicism to commercialism, your "lo-cholesterol amateur" aesthetic is one of the few ways it can maintain any radical exploratory edge. What do you think?

GS: Yes. Dominant business considerations seem to encourage the downside of consumer technology I spoke of earlier. Consumers are not encouraged to know more, just to want more and consume more.

However any business that wants to drive the transformation taking place in the recording industry has recognised the importance of new directions that are sometimes provided by people active in the creative arts. They've realised that there is also value in ideas that supposedly have no value. The activity of musicians and sound artists and others provides an applied research base that helps to provide direction and even initiative for new engineering development. This happened at the Sydney Conservatorium in a small way with the Fairlight CMI in the early 80s. It's been the pattern throughout the seventies at institutions like Stanford, where John Chowning developed digital FM or MIT where Barry Vercoe has developed a synthesis language that has almost become a de facto standard. But it has also happened with individual artists like John Bischoff, Jim Horton and Rich Gold who, independently of commercial development, made one of the first networks before the advent of MIDI using the most basic computer hardware.

Today's management philosophy often admonishes those inventors who waste time designing technological widgets. Perhaps those who preach such ideas need to be reminded how a technique developed for something, as

irrelevant (ie. commercially untargeted) as a piece of experimental music -- viz. George Antheil's Ballet Mecanique -- led to a US patent (with a lot of help from Hedy Lamarr) for a secret communications device that forms the basis of spread spectrum communication now widely used today in mobile cellular telephones. The big end of town hasn't yet realised that the academic environment is becoming less and less capable of producing what industry will need to sustain it. Maybe the next wave of experimental composers -- or musicians who like David Tudor, considered themselves at an advantage because they didn't feel the need to call themselves composers -- will simply not wait for a panacea for the ills of modern academia. Maybe they are already in the process of independently shaping new modes of communication through their own musical vision using their own resources.

When is a Guitar Not a Guitar?

Tom Fryer
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The title stems from a comment made by Warren Burt after a recent performance of mine. He said something along the lines of, “Well you've extended the instrument so far that the guitar has all but disappeared!” This got me thinking. At the time I remember agreeing with him but actually this is not the case. I don't agree!!

I see the guitar as a filter which creates unique results in electronic music due to its particular physicality. The fact that it has 6 strings allows for 6 independent MIDI channels to be easily accessed. Each string has a different sustain envelope. So in a sense you have 6 variations of a string as a controller. Polyphony is limited to 6 independent voices (in reality this more like 4 voices or less due to physical limitations of the instrument). Strings can be caused to vibrate in many ways e.g. plucked, bowed, struck, blown upon, scraped ... all of these methods create different results and these translate into the MIDI domain.

After using various commercially available MIDI guitar controllers for a number of years I became dissatisfied with the level of control available through the use of expression pedals. (At the time I performed with an array of six pedals in front of me!!). The fact that I only have 2 feet proved to be a limiting factor in manipulating more than 2 pedals at a time! Additionally expression pedals don't allow for a lot of nuance or fine control, especially not with any speed or precision. The search for increased expressivity led me to investigate the use of sensors as control interfaces and in 1996 while living in Amsterdam I spent 2 weeks at the STEIM institute using some of their hardware and software. Of particular interest to me at the time was their device the SensorLab. To quote their definition, "The STEIM SensorLab is a small, general purpose, analogue to MIDI interface for the prototyping of musical instruments and interactive control systems." (For more information go to http://www.xs4all.nl/~steim/main.html) With the SensorLab in mind I designed an extended MIDI guitar controller using a variety of sensors. With grateful assistance from the Australia Council I have been able to realise some aspects of my vision.

I do not intend to describe how the sensors function in detail nor describe the code written for the SensorLab. My aim is purely to provide an overview of a functioning extended performance instrument that is in regular use.

The flow chart in DIAGRAM 1 outlines my current performance set-up.

Fretless Guitar

This is a Strat style guitar on which I removed the frets. Being fretless it makes a fantastic MIDI controller as you get so much variation in pitch. With clever programming this can be used to great effect. I often assign pitchbend as a modulator of pan position allowing me to slide sounds around in the stereo field. The pickups are a standard Strat system with 1 humbucker and 2 single coils with a 5 position switch. The middle pickup has a phase reversal switch too. The output from the guitar goes to the audio in on the sampler. This allows access to the samplers FX busses. There is also a Hexaphonic pickup for the Pitch to MIDI converter. A Hexaphonic pickup sends pitchbend and note data for each string on a separate MIDI channel. On the fretless guitar this means that I can glissando in opposite directions on different strings.

In performance I often prepare the guitar in various ways with alligator clips or attack the instrument using an E Bow (electronic bowing device), slides, thimbles, a vibrator, a screwdriver or play on the fingerboard with both hands like piano. These manipulations produce a whole world of colours which do translate into MIDI data as well as producing interesting guitar textures.

Yamaha G50 Guitar to MIDI converter

One of many similar commercially available devices. This unit has some interesting and useful real-time control features. The distance

from the bridge that the string is picked can be translated into any of the standard continuous controllers. There is also an envelope follower which tracks the decay of the strings. These can be assigned to performance presets so are easily accessible. The note and controller data from the guitar is sent to the sampler via MAX but no processing occurs. This means that there is no audio output unless I am still playing. My last vestige of traditionalism!!

SensorLab

This is where the analogue signals from the sensors and the switch closures are converted into MIDI messages. See http://www.xs4all.nl/~steim/sensorlab.html for more information.

MCS2

An old Yamaha device which has inputs for two Continuous Controller pedals and two switches as well as Modulation and Pitch Bend wheels. It can also send Program Changes and has three assignable switches. I replaced the Modulation wheel with a socket giving another analogue input. Two of the switches are assigned to increment and decrement the Modulation value. (This is done in MAX).

Macintosh Powerbook running MAX

MAX is set up to give me visual feedback of the status of various controllers, FX assignments and some of the ASR10's internal parameters. Additionally there is mapping of all incoming notes on channel 16. (see Hexpad Keyboard below)

Ensoniq ASR10 Sampler

Another stock standard device with a good and useable FX processor. Sounds and FX are stored on a removable hard drive. I connect a master sustain pedal here and a patch select pedal. In the ASR10 4 patches are available for any instrument (a patch consists of 0 to 8 layers of samples). This is very convenient as you can make copies of samples in different layers that use little memory as they point to the original data, but can have entirely different parameter assignments. So with 1 foot movement you can move between different but related sound palettes.

Switches and Sensors

2 Momentary switches on the headstock - these swap SensorLab modes. The SensorLab can have 8 operational modes which can completely re-assign it's functionality. I currently use 2 modes which change some of the sensor assignments. These 2 switches select 1 of 2 modes. This could be achieved using 1 switch as a toggle but this would require visual feedback to be certain of the mode in use, with 2 discrete switches there is no doubt.

Hexpad Keyboard - This was originally a cheap Tandy keyboard which I cannibalised. I removed the circuit board and substituted 2 Hexadecimal data entry pads for the keys. These are mounted on a small Jiffy box containing the circuit board. This creates a compact MIDI keyboard. The MIDI note numbers are mapped to the appropriate SysEx string or Program change in MAX. This is the case for channel 16 only, notes on other channels are sent out to the sampler immediately.

Hexpads - 2 Hexadecimal data entry keypads mounted on the guitar body. They have identical function to the floor unit switches (see below), with the addition of an extra row of 8 switches that select 1 of 8 tables to which the accelerometer is mapped. The duplication of function between the footswitches and the Hexpads gives flexibility during performance.

Footswitch Unit - This is an array of 3 rows of 8 switches. (DIAGRAM 2) The bottom row sends out SysEx strings which select, de-select or stack any of the 8 instruments on the ASR10. Next the middle row, (reading from right to left) the first 6 switches toggle sustain (controller 64) on MIDI channels 1 to 6. This corresponds to strings 1 to 6 on the guitar. The 4 switches in the top right-hand corner each send a SysEx string to select FX variations in the ASR10. The ASR10 allows 4 variations on the currently loaded effect algorithm to be selected. The first 4 switches in the top row control selecting and loading FX from the Hard disk via "Virtual Button Pushes" (a SysEx string replicating a button on the front panel of the ASR10). Switch 1 selects the FX directory, switch 2 is the LOAD button and switches 3 and 4 scroll up and down the FX directory.
The remaining switches, 5 and 6 in the top row, increment and decrement Continuous Controller #4. I use this to modulate sample loop points in the ASR10.

Joystick - the x and y axes transmit modulation and CC#4 respectively (modes 1 and 2). All guitars should have a joystick, they are a fantastic and highly intuitive control interface.

Pressure strips top of neck and back of neck - aftertouch strips from Yamaha keyboards. They consist of 2 conductive strips which change resistance as they are pressed together. (currently out of service due to lack of conductive epoxy)

Linear motion potentiometers x2 - these are potentiometers that operate in a linear direction as opposed to a rotary direction. They are spring loaded so they return to 0 after displacement. They are located on either side of the headstock. Thin plastic cable is attached to them at one end and to the guitar body at the other. Any displacement of the cable produces a corresponding change in resistance. The varying voltage is converted to pitchbend and aftertouch in Mode 1 and modulation and CC#4 in Mode 2.

LDR (light dependent resistor) - A light sensitive resistor. This is another wonderful control interface. Currently out of service. The problem is with ambient light levels at venues. In a controlled situation (where it works!!) you feel as if you are sculpting the air and sound simultaneously.

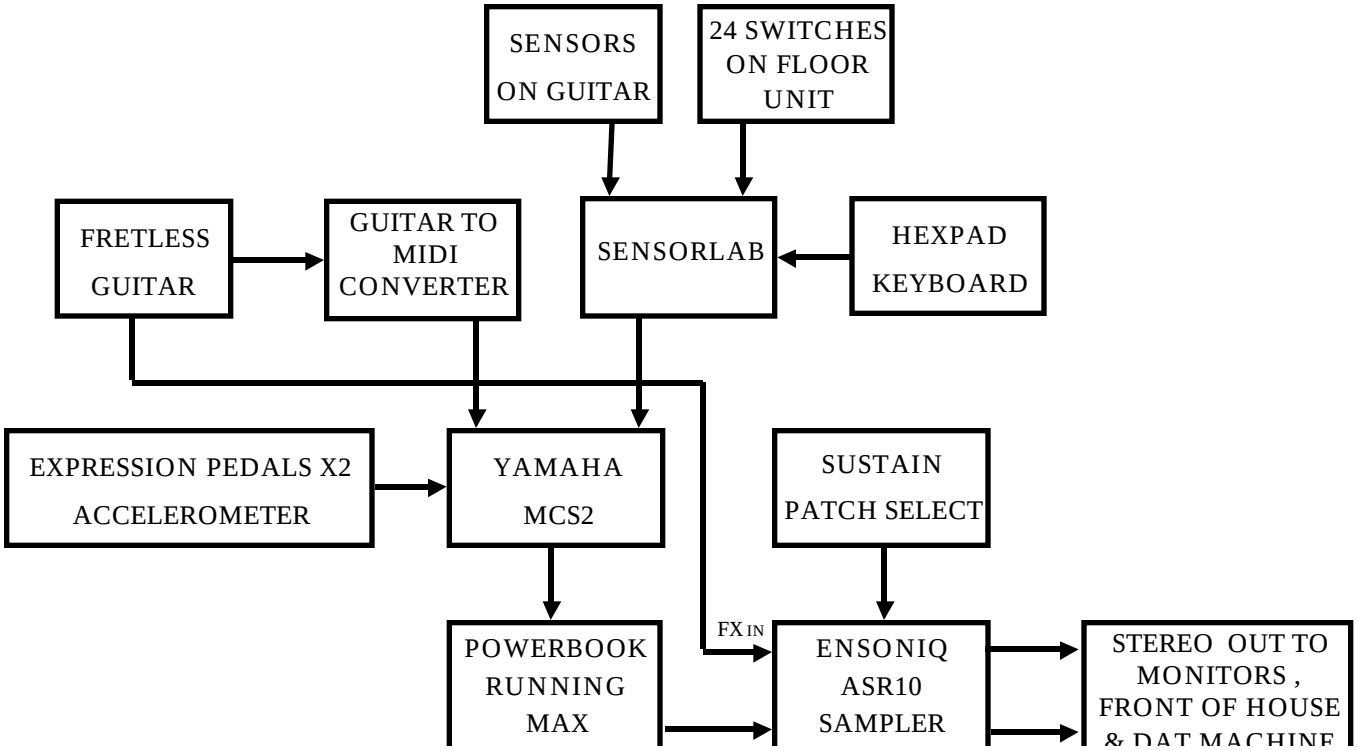
Accelerometer - A motion sensitive device. This is often attached to a plastic Trout. (No joke!!) The signal produced is mapped to 1 of 8 note-tables. This is currently done in MAX but will be implemented in the SensorLab in the near future. The tables are naturally set up to play fish scales ;-) usually using 10 tone equal temperament. The Pitchtables are set-up in the ASR10.

All the guitar mounted sensors and switches are routed using ribbon cable to an RS 232 socket mounted on the back of the guitar. This socket allows connection to the SensorLab.

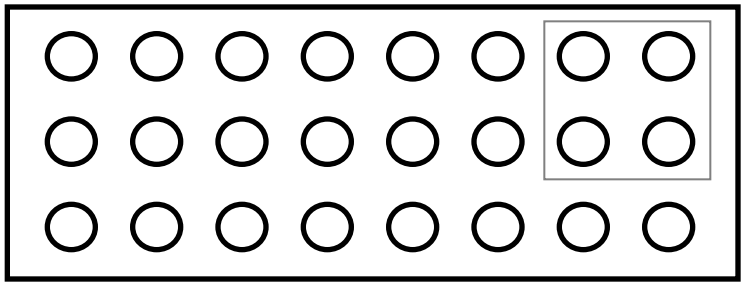
So there you have it. This is obviously a highly personal system tuned to my idiosyncrasies but the principles could be applied to extend the capabilities of any instrument or non-instrument. I still see it as playing the guitar but it is a little removed from the cheap Korean acoustic I got for Xmas as a fourteen year old. If you are interested in hearing the results drop me an email and I'll inform you of any upcoming gigs. Hey you could even buy a CD!!!

I would like to thank Rainer Linz for his invaluable advice and expertise.

TOM FRYER: DIAGRAM 1:



TOM FRYER: DIAGRAM 2



MARC CHESTERMAN: CITY-TAPE-TRANSFER (1996): DETAIL

MARC CHESTERMAN: CITY-TAPE-TRANSFER (1996): DETAIL

MARC CHESTERMAN: NEVER LOOK UP (1998): INSTALLATION SHOT

MARC CHESTERMAN: NEVER LOOK UP (1998): DETAIL

(A/I)MPLE MUSIC

Marc Chesterman
m.chest@auckland.ac.nz

Never Look Up (NLU) was originally created as a sound installation for Lopdell House Gallery, Auckland. 3 sound sources played through 4 pairs of speakers in a wide corridor like space.

Background work began with a piece in '96, **city-tape-transfer**. Audio cassettes were sent to friends in distant cities, and dictaphones were used to map 6-hour blocks of continuous city sounds.

On return the 4 sets of cassettes were replayed hanging above various public walkways. Berlin played back over a Karangahape Rd. footpath, Edinburgh outside the downtown P.O. A day was spent walking and bussing from one tape deck to the next, turning over and swapping cassettes.

Other cities' sounds mixed unnoticeably with Auckland city sounds. At 4 points in the mass mix that makes up our urban sound environment there was an accent, a microscopic pinpoint, signalling place within the landscape.

"Discovering the work has nothing to do with listening to what the artist has composed or inserted into the landscape. Above all, it has to do with discovering our own ability to listen and be involved, to experience the sound and substance of this landscape, to measure the volume of our own place in it." Denys Zacharopulos on the work of Max Neuhaus.

Never Look Up 1998 sound installation

Never Look Up aims to examine a sound space and set in motion listening perception in this space. This 'perception' is lifted up above the day to day visual/aural horizons and into the proposed sound space. Sounds move from beneath the listener - at floor level, to a position above the listener – at ceiling level.

About the sounds: Domestic sounds are juxtaposed with similar sounds of nature. Day to day sounds are inverted spatially so as to occur up above their normal place on the sonic horizon. Nature sounds and field recordings are manipulated to accentuate movement upwards – into the sonic space above our visual horizon. Some sounds run only on the ceiling speakers, signalling us to recognise them by looking up. Sampled sounds integrate rhythm and movement. Each sample forms its own rhythm, which generates possibilities for spatial movement. The speakers in the centre of the installation offer a space for listeners to enter. Sounds of unseen space, radio space. Aural and visual space for humans occurs within defined parameters – electromagnetic space reaches far beyond what the eyes and ears can perceive.

Sampling is the major source of sound production for **NLU**. Original material was collected with a DAT recorder or dictaphone, and sections were manipulated primarily with loop, envelope and pitch altering functions of a Roland MKS-100/S-330. Occasional reverb and/or delay was used. An uncluttered balance between silent tracks and the different sound groups was important. 'SoundHack' was excellent for binaural spatialising of radio space sounds. Listeners could 'enter' the space between two closely mounted horizontal speakers. Here was the pinpoint of the installation. Going inside gave an indication of a spectrum so wide it includes the rumble of the earth's core to beyond the upper reaches of microwaves.

The **NLU CD** is a studio based document of the sounds a listener may have heard. Attempts to document sounds within the space proved pointless. Emphasis had to move to the sounds, as the space itself was obviously too complex for 'stereo' containment. Mixing live, 2 CD players played the same source disc in shuffle mode, while a 3rd CD played sounds from radio space. This mixing created 120 minutes of footage. Editing and trimming it down to 30 minutes avoided repetitions and compacted the sound into 5 continuous segments. Some segments were reassembled in 'Sonic Studio' to improve the flow, timing, fade and volume. Computer applications performed 'tasks' (file processing/edits), and the sampler enabled real time performance. Keeping the process simple is important, as is keeping the 'tech' simple. Using domestic technology, such as amplifiers found dumped, and discarded speakers, made this project cost friendly.

Channel Hopping
An adventure in communicating with and about Electronic Music

Lulu Ong
lulu.ong@asia.apple.com

What's a composer of electroacoustic music to do when (re-) re-located to a fast-paced, cosmopolitan city that is dripping with technology but has never "heard it's song" or "answered to it's calls".

The trains in Singapore come armed with flat panel LCD displays, (6 in each carriage) that dance with pixel formations peddling retailer's wares. The road tolls are collected by sensor beams that communicate with microchips present on smart cards in each car as they drive by the affected areas and deduct a specified monetary value accordingly. This card, incidentally, can also be used to pay library fines, make phone calls, buy groceries....

The pillars that line the canteens at the university are lined with ethernet connections for direct access to the university network and internet by anyone with a valid password. You can get your train/bus ticket to automatically debit a nominated bank account every time it runs out of value and you'll never have to queue for another ticket again, (or you could buy it from a machine that speaks to you and shows you videos on how to get a new one).....

Technology is everywhere. Microprocessors invade all aspects of life...except, perhaps for music? To be honest I'm not sure at all. Judging from an amazing collection of books about electronic music at the local library (though I must add that they look suspiciously undisturbed), there should be lots of activity!, concerts!, symposiums!, conferences! by practising electronic musicians. Maybe I've been looking in the wrong place, but the

birthplace of SoundBlasters are full of people who think that the only means of making electronic music is by plugging in a SynClavier... ...MIDI jingles in the internet... ...and toys that beep melodies... or worse still, those mobile phone choruses!

My answer is an event that can_t decide if it wishes to be a concert, a documentary, or a cinematic experience or maybe a choreographed-theatrical-soiree. Better yet, a simulation of the universal ritual of today...the slouch-on-the-couch-while-relentlessly flicking-the-remote-control. Surely, everyone can relate to that.

Persuade an audience to leave SCV (Singapore Cable Vision) at home, and come watch this digital broadcast: The Just Intonation Channel (by Brooke Shelley), The Digital Signal Processing Channel, The Real-Time Interactive Synthesis Channel, The Algorithmic Composition Channel, The Physical Modeling Channel and yes, even the History (pre-PDP11) Channel. We'll even throw in the ad breaks. Re-created screens of the Fairlight CMI in action, resurrection of NeXT boxes, complete with the appropriate "soundtracks" each get their 30-60 seconds of limelight.

But WAIT! There's more....what's a couch potato event without the "live telecast" of sporting events. A PowerBook G3 and contact mic duo will challenge contestant Damien Lock in a perspex ping pong showdown. Simulcast over multi-channel speakers.

So come, techno-prodigies, and come, techno-phobes. See the music, and Hear the animation
(audio-visual pieces by Gordon Monro and Lulu Ong).

Hark! The silence of MIDI at this concert of computer music... The significant absence of synthesizers in our synthesis of sound... The prohibition of mass-produced effects boxes in our signal processing....

The micro-processors are fast, but the process of crafting, of customization, and of applying 50 layers of varnish onto the wooden body of a "violin" from within the guts of our injection-molded, high-flow, glass-filled polycarbonate CPUs, is as slow as ever. And I hope to find in this fast-paced city, friends and strangers, to ponder with me, the strange wonder that is electronic music.

Channel Hopping is occurring as part of a mini-festival of called Music Space. An annual event put on by The Substation (www.substation.org). The focus of Music Space this year, is "experimental, electronic music".

Channel Hopping will go live on the 9th, 10th and 11th of July at 45 Armenian Street, Singapore. It is an event engineered by Lulu Ong and Damien Lock featuring all Australian guest stars : Andrew Martin, Gordon Monro, Brooke Shelley and Matthew Hoare.

RESIDUE - Philip Samartzis (1998)

(Dorobo Limited Editions)
http://werple.net.au/~dorobo/dorobo.html
reviewed by **Philip Brophy**

Residue. The distilled, essential remnants of some physical manifestation. One thinks of the dried and the dead - from the crusty spittle in the corner of your mouth to the ectoplasmic goo left after a paranormal occurrence. Philip Samartzis reverses this mortification through his intensely molecular transformations of location sound recordings.

Simultaneously documenting his experience of place and the acoustics of space, he creates not merely a series of tonal soundscapes (now the province of budget tour ambience) but a disquieting rendering of his psycho-acoustic impressions. Through sophisticated electroacoustic manipulation sans the technological focus which generally attends the field, Samartzis has produced a radical inversion by transforming compounded sonic events - the crackle of leaf under your earlobe, a singer somewhere in a forest, a footstep on wet earth - into amazingly dimensional constructions.

The trick is in Samartzis' perceptual process. He is clearly focussed on the minutiae of our acoustic reality, and through his scrutinised hyper ellipsis, sound effects are revealed in all their deep, dark beauty. Devoid of heroic glory and romantic wallowing, Samartzis' compositions eschew cliched evocation in favour of alienating abstraction. Yet while content hovers as unfamiliar aural fabric, its material textures are inviting, alluring, compelling. This is sound where distinctions between original form and consequential residue are collapsed in the sonorum of locations. Not the simple result of processing, remixing, deconstructing, **RESIDUE** is a reconfigured return to the essential qualities which mark a space with its own aural aura.

WINDMILLS BORDERED BY NOTHINGNESS
- Philip Samartzis (1999)

(Dorobo Limited Editions)
reviewed by **Philip Brophy**

There has always been something remarkably obvious and unimaginative about employing the city as a metaphor for noise. It is a cheap desire to want silence, peace, calm - cheaper still to cast the urban as an oppressive cacophony. Cities from Calcutta to Tokyo to Pittsburgh all have ways in which negative space and acoustic dispersion envelop its denizens in manifold ways of hearing, breathing, traversing, existing. Indeed for many, the sound of the city can be a sonic salve.

Philip Samartzis' **WINDMILLS BORDERED BY NOTHINGNESS** (recorded at CEM, Netherlands) is an electroacoustic reminder of these altered psycho-acoustic states which one achieves by living within the noise of one's city. For noise is merely sound without apparent organization; the sonic without perceivable direction. Samartzis' strident processing of field recordings and an almost ascetic placement of aural shapes and tonal cues casts an imaginary wandering though the thunderous channelling of urban noise. Therein, one can discover much silence, peace, calm.

Both the urban and rural can be massive, monstrous, maniacal in their unleashing of sound effects, whether it be across darting traffic or undulating pastures. One need not adhere to the Futurist dictum of noise as the orgiastic celebration of steel, smoke and steam. The pre-Industrial figure of the windmill stands as a rich cipher for social and industrial endeavour: a mechanical Gargantuan of creaking wood, flushing water, grinding gears and billowing wind. In Samartzis' piece (via a knowing reference to Ilhan Mimaroglu's polyglottic compositions), such textures grow, hover, fade as he fuses and blends the recognisably organic with the acoustically unreal. Most interestingly, the editing of the sounds against silence - a strategy of 'bordering' the sonic with nothingness' - suggests a sonic cartography with great fluidity and sensuousness. It becomes a city in which I would gladly live.

The ACMA Committee for 1998/1999

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Vice President: Andrew Brown
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Secretary, acting Treasurer: Warren Burt
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CONTACTING ACMA

To contact ACMA, see our website:
http://farben.latrobe.edu.au/ACMA/

oz-computer-music

oz-computer-music is a listserv discussion group based at the Australian Centre for the Arts & Technology, Canberra. It acts as a forum for discussion amongst electroacoustic composers in Australia and beyond.

To subscribe to oz-computer-music: Send an e-mail to listproc@listproc.anu.edu.au and, inthe text of your message (not the subject line), write:
subscribe oz-computer-music firstname lastname
Note: Subscribers would substitute their first names and last names where the example says firstname lastname; no punctuation (such as parentheses or brackets) should surround the names.

To leave oz-computer-music: Send an e-mail to listproc@listproc.anu.edu.au and, in the text

of your message (not the subject line), write: unsubscribe oz-computer-music

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CALL FOR WORKS

****** Australia / New Zealand Only ******

Garth Paine
garth@activatedspace.com.au

I am curating a concert for the EuCuE Series XVII at Concordia University, Montreal, Canada. Last years series attracted more than 25 people from around the world. This year there will be a theme of electroacoustic / computer music from Australasia / western Pacific Rim. I am particularly interested in works created in Australia in the past 12 months. These works should have an electroacoustic focus. The concert format is to be virtually a 'tape (CD) only' concert since they have no real or continuing access to highly skilled, available and interested performers. If there are parts for speakers (non-professional), basic live electronics etc, these may be able to be considered. Multi-channel works on ADAT will also be accepted. The works will be presented on the EuCuE 20-channel sound projection system, and projected by students from the 'Advanced Electroacoustics Analysis' class. (They will be responsible for timelines, rehearsal etc, and the pieces will be discussed in class.) If there are timelines or scores, this would aid the process.

SUBMISSION DETAILS:

Please send all submissions to:
Garth Paine
EuCuE submission
30 Moodie Street
Carnegie
Victoria, 3163
Australia

If you need to you can call me on 03-95720133
Works must be received by **August 01**

Formats:
DAT (44.1 kHz, absolute time code, indexes between works) (**)
CD (preferred)
ADAT (stereo up to 8 channels)

(**) Please, no test tones. It is best to leave about 1 minute of blank tape at the start of the tape. An index code at the end of each piece is also useful, thus:

Index	Time	What
1	0:02	blank
2	1:00	1st piece start
3	8:15	1st piece end
4	9:00	2nd piece start
5	21:00	2nd piece end

Video presentation is also possible. Contact me to discuss proposals.

Biographical information and program notes should be on disc and in hard copy.

Please label the DAT and the paper liner. Pack materials securely (well padded envelope), write a return address CLEARLY on the outside of the package.

Works received will be housed in the EuCuE archive, and will also be considered for use on the CEC web page. (A release form for each piece to be considered for the CEC web page needs to be completed before the CEC would use any submitted materials.)

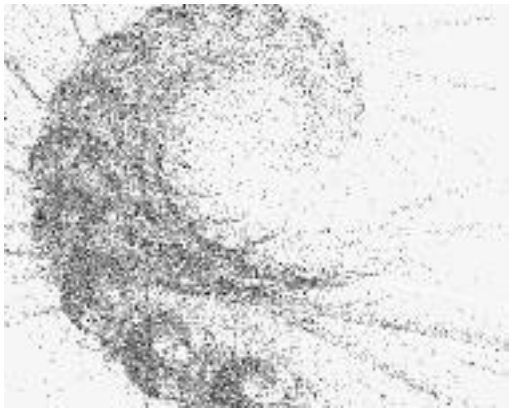
Here is a short version of the EuCuE "Call for Works" which will provide you with information on the concerts.

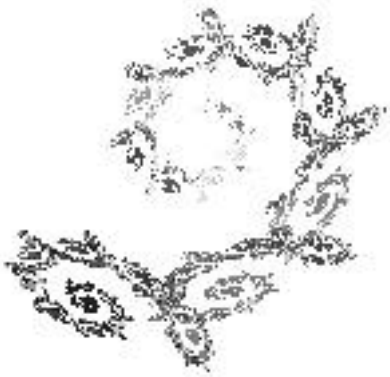
E u C u E

Electroacoustiques universite Concordia university Electroacoustics

General information and Call for Works

Concordia University, Montreal, Canada, presents an annual series of electroacoustic concerts in the Concordia University Concert Hall. The works presented on the 20 channel sound projection system are selected from works submitted nationally and internationally. 1998-99 marks the 17th season, with 12 concerts planned in the regular season. Dates are tentatively set for:
October 13, 14, 15, 16
November 10, 11, 12, 13 (SEAMUS Week)
February (third week tba)
There is a special series of student concerts in mid-May. The 18th season (1999-00) is tentatively scheduled for the same months.Of special note this year are:
-concerts of works by western Pacific Rim composers in October
-concerts of works by USA and SEAMUS composers in November
-other curated concerts
- a concert of multi-channel tape pieces, 4 to 8 or more, ADAT or analog (throughout, but particularly in February)





Australasian Computer Music Association

Application for Membership

ACMA was formed in June 1989, with the intention of providing a means for sharing information on a range of areas of music and technology in Australasia, including:

- music / sound synthesis
- signal processing
- MIDI
- music notation
- software and hardware, including commercially available products
- algorithmic composition and strategies
- Macintosh, SGI, PC etc.

Membership entitles you to receive and contribute to Chroma, the Association's newsletter, and participation in all ACMA events for 12 months. Back issues of Chroma are available at $3.

Annual Membership Fees (in Australian Dollars):

Unemployed/students $ 15
Employed $ 25
Institution $100
Assembly CD $ 20
Machine Messages CD $ 10 (only 24 left!)
Overseas members add extra postage expenses $ 15
CD purchases in Australia add postage $ 3

Please complete the details below and forward with your cheque to:

The Secretary
Australasian Computer Music Association, Inc.
PO Box 284
Fitzroy, Victoria 3065
Australia

Cheques should be made to the Australasian Computer Music Association, Inc.

Name:_____
Is this a renewal of membership? YES/NO
Address:_____
_____
_____
Telephone:_____
Fax:_____
Email:_____
Organization:_____
Particular areas of interest/equipment/software:_____
_____
_____
Do you agree to allow your name, address, telephone number and interests to be circulated to other members of the Association? YES/NO

Signature:_____
Date_____