

Vol. 17, no. 1. Spring 1997

Anray

Communications of the ICMA

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ARRAY
Spring 1997
Volume 17
Issue No. 1

ARRAY is the triannual publication of the International Computer Music Association.

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Publication of this **ARRAY** was made possible, in part, by a grant from the National Endowment for the Arts, USA.

All is going forward, on schedule and with heightened enthusiasm for the 1997 ICMC in Thessaloniki, Greece. The conference is scheduled for September 25-30, with non-conference workshops and concert on September 24th. In spite of a unanticipated scheduling conflict with ISEA in Chicago (see page 10), ICMC97 had over 325 technical submissions from 32 countries. The music submissions were equally outstanding and the preliminary concert schedule looks fantastic. The conference will feature two new ICMA Commission Awards by Pablo Furman (USA) and Ludgar Brümmer (Germany) and an ICMC Commission by Iannis Xenakis. Things are on schedule with the second compact disk of ICMA Commission Award recordings. Volume II will feature commissions by Michael Matthews (Canada), Stephen Montague (UK), Jonty Harrison (UK), Ricardo Dal Farra (Argentina) and Frances White (USA). Many thanks goes to Paul Lansky and Larry Austin for their work in the production of this project. Carla Scaletti's 1995 commission, *Public Organ*, will be part of a special ICMA CD ROM project to be released at a future date.

After four years of discussion, planning, rethinking, arguments and further thinking we are, as stated by one of the ICMA Board Members, "beginning a new era in ICMA history." The official addition of the word "International" to the Computer Music Association in 1991 (see *Array*, Vol. 15, No. 3, Winter, 1995, "Some Notes on the History of ICMA, ICMC, and How to Count Anniversaries") produced a major responsibility. If we are to represent the interests of the art and science of computer music on an international scope, then why do we continue to be a United States centered organization? The answer is complicated as were many of the solutions we banded about over the last four years. As an organization apart from the computer music conferences, the "Computer Music Association" had a very informal beginning at the 1978 ICMC at Northwestern University with no real considerations pro or con regarding international representation! Once the organization began to attract membership and conference attendance internationally, the roots had already taken hold

with all of the financial and publishing resources based in the United States. To make a long story a bit shorter we have now redesigned the ICMA Board and Officer architecture to accommodate regional Vice-Presidents as Officers and six Regional Board Members elected by the constituents of each region (Europe, the Americas, and Asia). This allows regional voting, possibilities for regional fund-raising and hopefully, an increase in international participation in the business and evolution of the ICMA. Details of this reorganization are given by Secretary/Treasurer Patte Wood on page 3. This new organization is effective immediately and will be reflected in the nomination and voting procedures for the ICMA Board of Directors. All members will be receiving regional and at-large nomination instructions soon.

NOTICE TO CONTRIBUTORS

The deadline for submissions for the next issue of *ARRAY*, Vol. 17, No. 2, is **June 1, 1997**. All submissions to *ARRAY* must be in machine-readable form. You must submit items using electronic mail or on a floppy disk (either Macintosh or PC). If you submit anything solely as hard copy, it will not be considered for publication in *ARRAY*. If you send a submission on floppy disk, please send two copies: one as a plain ASCII text-only file, and the other copy as the file that your word processor uses.

Please do not use any formatting other than italics and bold face. If you wish to include graphics with your submission, please do so in TIF or EPS format only. It is helpful if you can include a hard copy as well. If you would like your disk returned, please include a self-addressed, stamped return envelope.

Send *ARRAY* submissions to :
ARRAY/Katharine Norman
18 Northcote Road
London E17 7DU
U.K.
e-mail: kate@novamara.demon.co.uk

Email submissions and inquiries will receive the quickest response.

ICMA News, cont.

Speaking of regions, you should have received your ICMA Membership directory by now and noticed that we have added twenty-four new members from the People's Republic of China. This is the result of the P.R.C. Computer Music Conference in Shanghai last October and a membership drive coordinated by our offices and Professor Prof. Tong Zhong-Liang and Professor Liu Jian from the Wuhan Conservatory of Music. Welcome to our new colleagues! An "undocumented feature" in the ICMA database listed all of their names in the directory index, but failed to include addresses and such. Of course, this was discovered after the directory was printed so we included a special ICMA P.R.C. Addendum with all addresses. My apology to our new members from China.

The ICMA Board and Officers have approved, in principle, a new project tentatively called the ICMA Publications. As we move into a new generation of research and applications the increasing financial burden of publication is forcing historically significant and often technically relevant research to be forced out of print. The ICMA Publications is an attempt to serve as a "white horse" and rescue this material from being buried in the academic library stacks and available ongoing to our members at a reasonable price. These projects will be high quality photocopy reprints of the original publications, with quality velostyle binding. The purpose is to keep these materials available to the professional world at an affordable cost. Announcement of the first offering in this series will be made as soon as negotiations and arrangements are final.

ICMA Regionalization Effort

The International Computer Music Association is the primary international organization supporting research and creation in the field of computer music. The goal of providing an international platform for the computer music field is assured by the rotation of the International Computer Music Conference between Asia, Europe and America. But, at present, ICMA membership, its elected Board of Directors and the Board Officers remain predominantly (North) American. For the general health of the organization it is the ICMA's aim to rectify this imbalance.

At the ICMA Board Meeting of 1993, it was agreed that an investigation be conducted to ascertain how regional organizations could help address this issue of demographic imbalance, and a report was presented by the Vice-President for Conferences, Stephen Arnold, at the 1994 Board Meeting. It was decided that the establishment of Regional Chapters would be a valuable step in the direction of achieving a more balanced international membership.

The primary objectives of the establishment of *Regional Chapters* are:

- An increase in membership in the ICMA, and in consequence
- improved finances and, the ability to increase the level of ICMA activity, both centrally and regionally
- better representation of research and composition within a region
- a more fertile infrastructure for the development of ICMC sites within a region
- an improved presentation of ICMA and its affairs to ICMA members within a region.

It was concluded that initially, there would be three regions:
(i) the Americas

(ii) the continent of Europe, and
(iii) the continent of Asia together with Oceania, including Australia and New Zealand.

The ICMA was expanded to include three appointed directors from the three regional areas. This has been accomplished and the regional Vice Presidents are:
Shuji Hasimoto - Asia and Oceania
Wolfgang Winkler - Europe
Conrado Silva - The Americas

Along with the appointment of Regional Vice-Presidents, the Board of Directors realized that there needed to be a more balanced international representation on the elected ICMA Board. After much discussion, the Board of Directors has adopted the following changes to the organization of the Board:

The elected Board of Directors has been increased from 9 to 11 members.

The elected Board of Directors will now be made up of Directors-at-Large (the only board member category in existence up until now), and Regional Directors (a new board member category). All ICMA members can vote for Directors-at-Large and ICMA members from each specific region can vote for Regional Directors to represent their region on the board. Over the next 4 years elections will be held to phase in this new structure. In the year 2001, we should have 7 elected Directors-at-Large and 6 elected Regional Directors (two Regional Directors from each of the three regions specified above).

The ICMA Board of Directors feels that this effort will truly make the ICMA an International organization.

*Be sure to return your
nominations for Regional
and At-Large ICMA Board
Members.*

CONSORTIUM TO DISTRIBUTE COMPUTER MUSIC
CDCM COMPUTER MUSIC SERIES ON CENTAUR RECORDS COMPACT DISCS

The CDCM Computer Music Series continues, presenting four series themes:

*Computer Music Studios * The Virtuoso in the Computer Age*

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"Unparalleled!", *Computer Music Journal*

25 CD volumes of 121 compositions by 80 leading practitioners of computer music

"...digital made flesh...", *Keyboard Magazine*

"Very nicely done!", *Fanfare*

Upcoming releases: 1996-97*

Volume 25--*ICMA Commission Awards--1994-96*: Dal Farra, Harrison, Matthews, Montague, White

24--*The Composer in the Computer Age--VII*: Austin, Chadabe, Dashow, Lippe, Waschka

Currently available releases: 1988-96*

23--*The Composer in the Computer Age--VI*: Choi, Phelps, Settel, White

22--*The Composer in the Computer Age--V: A Salvatore Martirano Retrospective--1962-92*

21--*ICMA Commission Awards--1992-93*: Lippe, Mowitz, Rai, Vaggione

20--*The University of Texas Electronic Music Studios*: Fredrics, Korte, Nagel, Pinkston, Schulz, Wingate

19--*The Composer in the Computer Age--IV: A Larry Austin Retrospective, 1967-94*

18--*The Composer in the Computer Age--III*: Dodge, Floyd, Lansky, McTee, Strange

17--*Center for Contemporary Music at Mills*: Bischoff, Brown, Curran, Erbe, Payne

16--*The Composer in the Computer Age--II*: Austin, Matthews, Lippe, De Lisa, Chatham, Waschka

15--*The Virtuoso in the Computer Age--V*: Appleton, Austin, Jaffe, Raduskaya, Schloss

14--*The Virtuoso in the Computer Age--IV*: Martirano, Schindler, Scott, Subotnick, Waschka

13--*The Virtuoso in the Computer Age--III*: Austin, La Barbara, Pope, Spiegel.

12--*The Composer in the Computer Age--I*: Karpen, Rahn, Thome

11--*The Virtuoso in the Computer Age--II*: Appleton, Austin, Loy, Morrill/Chafe, Polansky, Rolnick, Waschka,

10--*The Virtuoso in the Computer Age--I*: Austin, Braxton, Lansky, Melby, Rosenboom

9--*CEMI at University of North Texas*: Austin, Keefe, McTee, Piekarski, Rogers, Winsor, Waschka

8--*CCRMA, Stanford; CSMT, Yale; CMS Colgate; CMS; Eastman*: Berger, Chafe, Jaffe, Morrill, Schindler

7--*iEAR: integrated Electronic Arts at Rensselaer*: Chadabe, Kabat, McLean, Oliveros, Rolnick

6--*The Bregman Electronic Music Studio at Dartmouth*: Appleton, Jones, Moravec, Wolff

5--*The Winham Laboratory at Princeton*: Butler, Garton, Lansky, Milburn, Warren, White

4--*CCM at Mills*: "Systems of Judgement" by David Rosenboom

3--*Experimental Music Studio/Computer Music Project at Illinois*: Brun, Martirano, Melby, Scaletti, Tipei, Wyatt

2--*iEAR at Rensselaer*: Baitz, Bresnick, Lindroth, Rolnick, Teitelbaum.

1--*CEMI at University of North Texas*: Austin, Clark, Hunt, Winsor

***Visit the CDCM home page for complete details--<http://www.scs.unt.edu/cemi/cdc/cdc.htm>**

Subscription order, Volumes 1 - 25 at \$15/CD = \$375

Order 5 or more discs at \$16/CD * Order 1 - 4 discs at \$18/CD

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P.O. Box 50888, Denton, TX 76206 USA

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FAX: (817) 565-2002

EMAIL: cdcm@cube.cemi.unt.edu

Announcements

WOW'EM

(Women On the Web—ElectronMedia) is a site aimed at young women with interests in the media arts. The URL is: <http://music.dartmouth.edu/~wowem>.

Young women ages 15-20 with interests in music or art, and math, science or computers will find helpful information on everything from "How to Choose a College" to "In-Forms" such as books, magazines and website. There are sections on electronic music and multimedia, as well as specific information on women in technology/women in the arts.

Kristine H. Burns

Kristine.H.Burns@Dartmouth.edu
<http://music.dartmouth.edu/~kristine>
<http://music.dartmouth.edu/~wowem>

The Center for Computer Assisted Research in the Humanities has moved. The new address is:

CCARH, Braun Music Center #129
Stanford University
Stanford, CA 94305-3076
USA
<http://ccrma-www.stanford.edu/CCARH>

ISEA97 at the School of the Art Institute of Chicago

From September 22 through 27, Chicago is welcoming the electronic art world's most exciting thinkers as the host of ISEA97, the Eighth International Symposium on Electronic Art. The week-long conference is organized by the School of the Art Institute of Chicago in conjunction with the Inter-Society for the Electronic Arts. Launching the conference are two days of workshops addressing hands-on technological issues, novel approaches to teaching in this field and other topics related to electronic art, defined as all art using electronic technology as an essential prerequisite for its production. The subsequent three-day academic sessions feature keynote and plenary speakers, academic paper sessions, topical small-group discussions, and exhibitions and events presented by today's foremost electronic arts scholars and art-

ists. Many of Chicago's leading cultural institutions are planning to work in conjunction with ISEA'97 by hosting special events throughout the week, such as concerts, performances, and art exhibitions and installations. The ISEA97 web site: <http://www.artic.edu/~isea97> contains the most current and complete information on this important international event. The site allows easy registration for ISEA97 with substantial discounts in fees for students and for those registering early. For those without web access, email or contact the above number with your name, address, phone and fax.

"CONTENT," the theme of ISEA97, is being approached from many points of view. In the decades since McLuhan's observations on media, a profound change has taken place in the arts. As computer technology has become increasingly widespread and affordable, many artists are asking "Now what?" For years, the challenges for electronic artists have often been the overcoming of technological barriers and the pioneering of new media. Today, we find ourselves wrestling with the more perplexing questions of meaning, content, and social context. Is the medium still the message? How are computers shaping the languages of expression for our age? What can we say now that we could not say before? Do these new media change our vision of ourselves and the world? How is physical experience, even architecture, being redefined by the virtual? Does advancing technological obsolescence preclude historical continuity?

Past ISEA conferences include 1996, Rotterdam; '95, Montreal; '94, Helsinki; '93, Minneapolis; '92 Sydney, '90 Groningen; and 1988 Utrecht, Holland. The series of symposia was initiated in 1988 by the Inter-Society for the Electronic Arts in order to support the founding and maintenance of an international network of organizations and individuals in the field of electronic arts ("arts" is meant to include all disciplines, not excluding music, dance, theater, etc.). The conference serves as a meeting ground for interdisciplinary involvement among scientists, theorists, academicians and artists facing the problems and potentials of electronic art.

Shawn Decker
Associate Professor
Chair, Art and Technology Studies Dept.
Chair, International Symposium on the Electronic Arts, 1997
School of the Art Institute of Chicago
Chicago, IL 60603
(312)-345-3566

ISEA97 Website:

<http://www.artic.edu/~isea97>
Please direct any inquiries to
isea97@artic.edu

STANFORD UNIVERSITY CCRMA WORKSHOPS 1997

include:

Audio and Haptic Components of Virtual Reality Design
Computer-Assisted Research in Music Scholarship
Interactive Composition and Performance with Computers
Digital Signal Processing for Audio
Algorithmic Composition with Computers in LISP Environment

COURSE DESCRIPTIONS

Audio and Haptic Components of Virtual Reality Design

June 16 - June 27, 1997
Individual fee: \$800, Affiliate fee: \$1000,
Corporate Non-Affiliate fee: \$1200
Two weeks instruction and laboratory.
Limited to 15 participants.
Instructors: Sile O'Modhrain, Craig Sapp. Guest Lecturers: Perry R. Cook (Princeton Univ.), Brent Gillespie (Northwestern Univ.), Dan Levitin (Interval Research), Bill Verplank (Interval Research), Beth Wenzel (NASA)

This course examines how our minds model the physical world. Familiarity with this relationship between the exogenous and endogenous worlds is crucial for the design of efficient and effective virtual environments. We will focus on the senses of sound and touch and how these senses relate to physically measurable and reproducible quantities. Relevant topics from the fields of psychophysics, acoustics, cognitive psychology, human-computer interaction, and physiology will be covered. In particular,

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the salience of various auditory and haptic phenomena to the perception and performance of music will be examined.

Morning lectures will introduce important concepts from the fields listed above and will also feature talks by eminent researchers and entrepreneurs working in the fields of psychoacoustics and haptics. Afternoon labs will provide practical experience in psychophysical experiment design and execution. Various audio and haptic effects and illusions will be demonstrated and applied to virtual environments. Participants will design their own perceptual experiments and conduct pilot studies of their experiments. Haptic computer interfaces as well as sound synthesis tools will be made available for experiment designs.

*Computers in Music Scholarship
(Music Theory, Analysis, History,
Ethnomusicology)*

June 16 - June 27, 1997; Fee: \$800
Two weeks instruction. Limited to 15
participants.

The workshop is presented in cooperation with the Center for Computer-Assisted Research in Humanities (CCARH), Stanford University.
Instructors: David Huron, Andreas Kornstaedt

This course provides a comprehensive introduction to computer-assisted music research using the Humdrum Toolkit. Participants will learn to manipulate computer-based scores, tablatures, and other documents in order to solve a wide variety of analytic problems. By way of example, participants will learn to characterize common patterns of orchestration in Beethoven symphonies, examine harmony and voice-leading in Bach chorales, and investigate text/melody relationships in Gregorian chant.

Thousands of full scores will be available for processing on-line — including repertoires from various cultures, periods, and genres. The course will be of particular value to scholars contemplating graduate level or advanced music research projects. The seminar staff will provide individual advice on participants' own research projects.

All software and documentation from the
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workshop (including a sizeable score database) are free to take. The software is available for UNIX, DOS, OS/2 and Windows-95 (some restrictions apply). Familiarity with the 'emacs' or 'vi' text editors is recommended; limited knowledge of UNIX is helpful.

Interactive Composition and Performance with Computers

July 7 - July 18, 1997; Fee: \$800
Two weeks instruction. Limited to 12
participants.
Instructors: Jonathan Berger, Charles Nichols

This introductory course will explore new approaches to interaction and improvisation between composer, performer, and computer. Topics to be discussed include performance interaction strategies (techniques of synchronization, timing, cueing, and parametric control), interactive algorithms, simulating live performance situations, tempo tracking, pitch following, and performance modeling.

Hands on participation will use the Max programming environment and Common Music, a language that runs on Macintosh, PC and Unix based platforms. It will also involve real-time interaction using the Mathews-Boie Radio Baton (MIDI conductor/controller device)*. This course is particularly geared towards performers with an interest in interactive performance, improvisation and other ventures into the world of music technology. Emphasis will be on group performance projects, composition of new works, and realizations of existing interactive works.

For more information on Radio Baton please visit:
<http://ccrma-www.stanford.edu/CCRMA/Overview/node50.html>

*Algorithmic Composition and Sound Synthesis in Lisp
Introduction to Sound Synthesis and Signal Processing Using CLM*

July 21 - July 25, 1997; Fee: \$400
One week hands-on instruction. Limited to 20 participants.
Instructors: Fernando Lopez Lezcano, Juan
Spring 1997

Carlos Pampin

This is an introductory and fast-paced workshop in sound synthesis techniques and digital audio effects, and their implementation in the CLM (Common Lisp Music) environment. We will design software instruments that implement additive synthesis, subtractive, FM, sampling, wavetables, granular, spectral and physical modeling synthesis; and digital effects algorithms such as phasing, flanging, chorus, distortion and reverberation. Introductory signal processing and perception topics will be included.

Common Lisp Music (CLM)* is a public domain sound design language written on top of Common Lisp, currently running in Macintosh PowerPCs and several UNIX environments including SGI, Sun, NeXT and PC's running Linux. The workshop includes a Common Lisp lab that will teach basic Lisp programming skills. Familiarity with computers and programming languages is helpful but programming proficiency is not required.

For more information on CLM please visit:
<http://www-ccrma.stanford.edu/CCRMA/Software/clm/clm.html>

Introduction to Algorithmic Composition

July 28 - August 8, 1997; Fee: \$800
Two weeks hands-on instruction.
Limited to 20 participants.
Instructor: Heinrich Taube

This course introduces basic principles and techniques of algorithmic composition and covers such topics as object oriented music representation, chance composition, musical automata and pattern languages. Sound synthesis used in the course material will include MIDI and Common Lisp Music. The course will be taught using the Common Music environment on Mac and NeXT workstations.

The workshop will be divided into morning lectures and afternoon lab times. During the lab hours the students will gain a hands-on experience working through projects and examples first presented in the morning lecture. All source code and documents from the workshop are free to take. Participation in Introduction to Sound Synthesis workshop or familiarity with Lisp is neces-

Announcements, cont.

sary for taking the workshop. Other prior programming experience is useful but not required.

Advanced Projects in Algorithmic Composition

August 11 - August 15, 1997; Fee: \$400
One week hands-on instruction. Limited to 20 participants.
Instructor: Juan Carlos Pampin

Topics are continued from the first two workshops but emphasis is placed on developing programming skills while working on each participant's individual projects using environments learned in the previous two workshops.

[Students may take the full 4 week Algorithmic Composition three-part course at a reduced tuition rate of \$1400. The combination of any two parts of the course will not be discounted].

Digital Signal Processing for Audio: Spectral and Physical Models

August 11 - August 22, 1997
Individual, Corporate Affiliate Fee: \$1200,
Corporate Non-Affiliate Fee: \$1500
Two weeks instruction. Limited to 15 participants.
Instructors: Perry R. Cook, Xavier Serra

This course will cover analysis and synthesis of musical signals based on spectral and physical models. The course will be organized into morning lectures covering theoretical aspects of the models, and afternoon labs. The morning lectures will present topics such as Fourier theory, spectrum analysis, the phase vocoder, digital waveguides, digital filter theory, pitch detection, linear predictive coding (LPC), and various other aspects of signal processing of interest in musical applications.

The afternoon labs will be hands-on sessions using SMS and the Synthesis Toolkit in C++, SynthBuilder, and other software systems and utilities. Familiarity with engineering, mathematics, physics, and pro-

gramming is a plus, but the lectures and labs will be geared to a musical audience with basic experience in math and science. Most of the programs used in the workshop will be available to take.

ANNUAL SUMMER CONCERT

The annual concert of new music by CCRMA composers will take place during the Summer Workshops. It will be held on the Stanford campus on July 24, 1997.

ADDITIONAL INFORMATION

Housing costs are not included in the course fee. Campus housing is available for the summer workshops through the Stanford University Conference Office. Information on lodgings in Stanford/Palo Alto vicinity will be sent to all workshop participants. No academic credit is offered for participation in the workshops.

FOR APPLICATIONS CONTACT:

CCRMA Summer Workshops
Department of Music
Stanford University
Stanford, CA 94305-8180, USA.

Phone: (415) 723-4971
Fax: (415) 723-8468
E-mail: aledin@ccrma.Stanford.EDU
WWW: <http://ccrma-www.stanford.edu/>

CECILIA v1.5b5 ...or how to make Csound productive.

New Distortion, Stretcher and ultraVocoder modules. Interactive manual includes the csound 3.44 opcodes. Bug fixes. SGI only ...still (Cecilia v2.0 will be multiplatform...) <http://www.musique.umontreal.ca/Org/CompoElectro/CEC/>

Jean Piche
Universite de Montreal
<http://mistrall.ere.umontreal.ca/~pichej>
<http://www.musique.umontreal.ca/Org/CompoElectro/CEC/>

JIM'97
Journées d'Informatique Musicale
Bibliothèque de la Part-Dieu, Lyon - France
June 6 - 7, 1997

<http://www.grame.fr/>
jim97jim97@rd.grame.fr

The JIM computer music conference aims to gather researchers in computer music and musicians who use computers as a means of expression or as a tool for composition, in order to present the most advanced researches and their development prospects.

IJCAI-97 Workshop

Specialized topic: "Issues in AI and Music — Evaluation and Assessment —" to be held in the context of the International Joint Conference on Artificial Intelligence (IJCAI-97)

Date: Either one of days Aug. 23-25 (full day)
Place: Nagoya Congress Center, Nagoya, Japan

The field of AI and Music (i.e. AI research aimed at music as its specific target) is currently expanding both in its width and depth, with increasing number of contributions dealing with various aspects of music. This trend is further supported by advances in multi-media systems, and growing interest in subjective/artistic aspects of human activity. Music as a research topic is gaining recognition in the AI community at large, as can be seen from the series of workshops on music held in major AI conferences (e.g., AAI-88, IJCAI-89, ECAI-90, ECAI-92, AAI-94, and IJCAI-95).

The field can be seen to be growing towards its maturity, and that instead of being a collection of individual pioneering work, is entering the stage of establishing itself as a sound research field. That is, to provide common grounds for mutual information exchange and evaluation, thus cumulating the contributions which will be of value to both inside and outside of the field.

In view of this situation, this workshop will focus on the issue of evaluation and assessment of research results in AI and Music. The aim is to develop a framework of research evaluation so that the obtained results can be properly assessed and categorized from a common viewpoint. This addresses a broad range of issues, starting, at the informal end, from cultivating a general ethical attitude; to the development of concrete evaluation methodology, criteria,

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*Don't forget to send in your
ICMA BOARD nominations.
The nominations deadline has
been extended until June 1st!*

and procedures. The workshop will focus mainly on technical issues, although discussion on more foundational issues is also within its scope.

Inquiries:

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fax: +81-462-40-4721
hirata@nefertiti.brl.ntt.co.jp

**THE AUSTRALIAN NETWORK FOR
ART AND TECHNOLOGY has a new-
look webpage for 1997 !**

anat@camtech.net.au

postal address: PO Box 8029 Hindley Street,
Adelaide, SA 5000, Australia
street address: Lion Arts Centre, cnr
Morphett St and North Tce, Adelaide

web address: <http://www.va.com.au/anat/>

telephone: +61 (0)8-231-9037
fax: +61 (0)8-211-7323
Director: Amanda McDonald Crowley (tel:
0419 829 313)
Administrator: Brett Spilsbury

Memberships: \$A10 (unwaged), \$A20
(waged), \$A40 (institutions)

ANAT receives support from The Australia Council, the Federal Government's arts funding and advisory body

SILENCE

From: Michael Gogins
gogins@nyc.pipeline.com

I am pleased to announce the availability of Silence, new shareware for computer music, through my home page at:

<http://www.pipeline.com/~gogins>

This site contains an archive, Silence.zip, featuring an ActiveX object, wcsound.dll, that serves as a Windows 95 or Windows NT graphical user interface for Csound. It

displays scores in piano roll format, stores score and orchestra in a single file, serves as an instrument librarian, translates csound scores to and from midi files, and plugs into other programs and programming languages such as C++ or Visual Basic via OLE automation to provide a score manager and rendering engine. Another program, wcsound.exe, enables wcsound.dll to run as a standalone program. Also available in the archive are algorithmic composition and synthesis programs based on Lindenmayer systems and iterated function systems, and a program for translating Windows screen shots into Csound scores or additive synthesis files. This software is available for a modest license fee.

These programs illustrate the main purpose of wcsound.dll: to make it easier to write algorithmic composition programs.

The archive also contains a Windows 95 build of Csound.exe that implements plugin opcodes. Such opcodes link with Csound at run time and do not require Csound to be recompiled before they can be used. Included as a sample of this facility is a plugin library featuring all the physical modeling

Announcements, cont.

instruments in Perry R. Cook's Synthesis Toolkit 95 in the form of Csound opcodes. Csound and the Cook opcodes are available without a license fee.

I invite other developers and composers to contribute plugin opcodes for this build of Csound, which is intended to remain in the public domain.

My thanks to Brad Garton, Perry R. Cook, John Fitch, and all the other people who have made this possible.

LES ATELIERS WORKSHOP

A new musical workshop **LES ATELIERS** (Nice, France) purposes a reading panel for the years 1997 and 1998. The aim of this workshop is to animate a platform for new music in instrumental, electronic ways within the domain of writing, improvised and fixed musics. An another aim is to improve new ways of concert presentations. This workshop is ready to experiment new styles of music regarding the evolution of the music today.

INFORMATION: Recent Concerts

30/01 Jerome Joy: *Motifs* (1997) pour bande magnetique et vibraphone
9/03 Morton Feldman, Eliane Radigue, Steve Lacy, La Monte Young, Frederic L'Epee, Jan-Pascal Alagna, Giacinto Scelsi, John Oswald, Jerome Joy.
28/03 Malcolm Goldstein, Alex Grillo en prevision Horatiu Radulescu, *Inner Time II* (1993), pour 7 clarinettes

You can send us your proposals:

- instrumental scores (with a recording eventually)
- scores and electronic devices (mixed-music) (with a recording eventually)
- tapes (electroacoustic music) (copy DAT)
- proposals to come and perform one or several pieces (improvised music, electroacoustic music, mixed-music) (with your project)

Send us with your proposition with a CV and other documents (CD, tapes,...). For

the instrumental works, the workshop is variable, so you can send scores for one, two or more instruments. The list below can be completed with other instruments if the piece necessitates them.

L'Ensemble LES ATELIERS / The workshop:

4vln ,2vlc ,2alt ,2ctrb,1hrp ,4clar, 2htb, 2fl, 3bsn, 2or3cor, 2or3trmp,1tuba, 4perc, 1piano ,2vx , 1sax

Environnement Electronique / Electronic devices: (with support of Villa Arson and CIRM Nice):

Macintosh environment, Max, ProTools, SoundDesigner, S1000, DX7II, SPX1000, LXP15 and others.

Comite de Lecture / Reading Panel:

Jerome Joy, Francois Dutreuil, Alex Grillo, Frederic l'Epee, Jean-Claude Risset (sous reserve), Michel Redolfi

Submission Dates:

1 march 1997 1 may 1997 1 july 1997 1 november 1997 1 december 1997

Contact and address for submissions:

Jerome Joy URL:<http://web.azur.fr/habitation>
6 Rue Fodere, 06300 Nice, France
URL:<http://web.azur.fr/collecticiel/collage>
Fax 33/ 04 93 568 432 URL:<http://web.azur.fr/audiolab>
e-mail jjoy@mail.azur.fr URL:<http://web.azur.fr/audiovision>

Platforms: A Quest, a Query

by Larry Austin

This past November 16, 1996, I posted the technical query about computer music platforms that follows on three electroacoustic/computer music/composer listservers, including icma-talk@bath.ac.uk (ICMA), cecdiscuss@concordia.ca (Canadian Electroacoustic Community), and scimembers@serial.music.uiowa.edu (Society of Composers, Inc.).

For the next 30 days or so the numerous daily responses and consequent interaction among all respondents to my acquisition plea was generous and informed. Information, experience and helpful advice came from colleagues around the world. Many

respondents' views on systems were debated. All were valuable to me in making my acquisition decision and, apparently, to many in our community who participate, read, and are served by these lists. Array Editor Katharine Norman and I decided to post the entire chronicle (about 24,000 words!!) on the ICMA website. Reach the link from <http://music.dartmouth.edu/~icma>.

Check it out! Enjoy! My original posted query follows:

Nov. 16, 1996

Dear colleagues and friends:

I need your help, advice, and experience, to wit:

1. I am in acquisition mode; i.e., I have been researching what hardware system(s) to purchase to succeed my trusty NeXTstation (which I will keep) with its digital sound i/o and its software synthesis apps (Csound, cmix, sound editors, etc.). I will want to continue making tape pieces and tape-plus pieces and, system permitting, real-time pieces. Music notation software would be welcome but not requisite.

2. I have thought that the Silicon Graphics Indy and, now, O2 computers would be logical (sic) successors to my NeXT. True?

3. I have thought that the Pro Tools system on a Mac was/is powerful, but I am a UNIX kind of guy, and I don't trust Mac's future, not to mention its operating system clones.

4. I am able to pay for the RIGHT system, so cost, while a factor, is not the prime determinant.

5. I would like for my next system to be good for about 20 pieces or 10 years, whichever comes first.

6. This system will only be used by me, will have no other persons to maintain it, but will be on-line to everywhere, so that I can get free info, hopefully, and advertise on the WWW.

Are there others out there who have a similar dilemma at this time?

Continuing to search,
Larry Austin, composer
Denton, TX

FROG PEAK PROJECT

ICMA members are invited to take part in a computer music CD project which can be found at
<http://music.calarts.edu/~FrogPeak.html>
Larry Polansky

ICMA WEBSITE - SEND ICMA YOUR FAVOURITE (...relevant!) URLS

To make the ICMA Website as robust as we can, we would like people to send us URL's for composers, software, recording companies, organizations, and other items under any other category on the page, which is located at

<http://music.dartmouth.edu/~icma/>

Larry Polansky and Leslie Stone
Dartmouth/ICMA

Reply to: leslie.stone@dartmouth.edu

AUSTRALIAN COMPUTER MUSIC CONFERENCE

INTERFACE 97 will be the fifth annual conference of the Australian Computer Music Conference held for the first time in New Zealand at the School of Music, University of Auckland. It is a gathering of composers, performers, researchers and educators from Australia and New Zealand with representatives from around the world and will be an exciting sharing of issues and developments in electroacoustic music.

INTERFACE 97 has as its broad theme the exploration of the interfaces between computer technology, music and education. Submissions for all papers abstracts, panel proposals and compositions are to be received by April 4, 1997. For information, registration, accommodation etc please contact: c.syme@auckland.ac.nz

You will find us also on the web at:
<http://www.mus.auckland.ac.nz/acma97/acmahome.html>

CALL FOR SCORES

Students at Moorhead State University have formed a new ensemble dedicated to playing electroacoustic music. They are look-

ing for new scores. Send enquiries to:

Mary Lee A. Roberts, e-mail:
robertsm@mhd1.moorhead.msus.edu
Music Department
Moorhead State University
Moorhead, MN 56563
USA
18-236-4610 (Office)
701-298-9625 (Home)

OBERLIN COLLEGE WORKSHOPS IN ELECTRONIC AND COMPUTER MUSIC

The Conservatory of Music at Oberlin College invites you to participate in the twelfth annual series of workshops in electronic and computer music, June 15-29, 1997. The workshops are designed for high school and college students, teachers, professional musicians, and hobbyists. These workshops are for anyone who wants to enrich their understanding of new music media.

The workshops are Macintosh based and the topics we cover include: Sequencing (Vision, MusicShop, Performer), Music printing (Finale), Synthesizer programming (Galaxy), Sampling (Sound Designer, Alchemy, TurboSynth) Alternate MIDI controllers, Algorithmic composition (MAX).

For more information about the Workshops in Electronic and Computer Music, contact:

Office of Outreach Programs
Conservatory of Music, Oberlin College
Oberlin, OH 44074
(216-775-8044)
Email:
anna.hoffmann@qmgate.cc.oberlin.edu
or have a look at our web page at:
<http://timara.con.oberlin.edu/dept/wrkshp.htm>

MIXVIEWS - linux version

The latest version of Doug Scott's MiXViews for Linux is now freely available from the MiXViews Home Page at:

<http://www.ccmrc.ucsb.edu/~doug/htmls/MiXViews.html>

MiXViews is a graphic soundfile recorder, player, converter, editor and analysis/re-

synthesis engine. It's also one of the main reasons I set up a Linux system...

Dave Phillips

<http://www.bright.net/~dlphilp/index.html>

MUSICA NOVA COMPETITION RESULTS

The Spolecnost pro elektroakustickou hudbu (Society for Electroacoustic Music) and the Foundation of Czech Music Fund announce:

MUSICA NOVA 96

International Electroacoustic Music Competition

PRIZE-WINNING COMPOSERS 1996 !

MUSICA NOVA 96 FINAL PROTOCOL

JURY: Dr. Zdenka CECHOVA, Dr. Wanda DOBROVSKA, Ing. Juraj DURIS, Dr. Miroslav KADUCH, Ing. Karel ODSTRCIL, Prof. Alois PINOS, Mgr. Rudolf RUZICKA

104 pieces were considered from 22 countries
Praha -Prague, October 27, 1996

Category A (electroacoustic music)
Grand Prize: Not Awarded
Main Prize: Marc Ainger (USA) *Lament*
Main Prize: Charles Bestor (USA) *Into the Labyrinth*
Special Prize: Mathew Adkins (England) *Pagan Circus*
Special Prize: John Levack Drever (Scotland): *Butterfly Lovers*
Prize for Best Czech Composition: Emil Viklicky (CR) *Rajska Zahrada*
Honorable Mention: Adrian Moore (U.K.) *Junky*

Category B (multimedia projects using electroacoustic music)
Grand Prize: Not Awarded
Main Prize: Alessandro Cipriani (Italy) *Terra Fluida*
Main Prize: Mario Verandi (England) *Effected*

Prizes were presented during the award concert in December 1996 in Prague. The awarded compositions will be performed at concerts organized by the Society for Electroacoustic Music and broadcasted by radio and TV.

Announcements, cont.

Karel ODSTRCIL
Chairman of the
Competition

Rudolf RUZICKA
Chairman of the Jury

DIEM is pleased to announce the opening of its Web site at:
<http://www.daimi.aau.dk/~diem/>

DIEM, The Danish Institute of Electroacoustic Music, is Denmark's national center of electroacoustic music, dedicated to the production, teaching, research and performance of electroacoustic music in Denmark. In addition to productions encompassing all types of electroacoustic music, DIEM organizes festivals, concerts, seminars, workshops and master classes. In September 1994 DIEM hosted the 19th International Computer Music Conference (ICMC 94), where leading composers and researchers from around the world met in Aarhus, Denmark for five days.

Stop by DIEM's web site for information about productions, concerts, festivals, facilities, staff, seminars and research.

<http://www.daimi.aau.dk/~diem/>

DIEM
Musikhuset Aarhus
Thomas Jensens Alle
DK 8000 Aarhus C
Denmark
Phone: +45 8931 8160
Fax: +45 8931 8066
Email: diem@daimi.aau.dk

ONLINE ISSUE OF "MIKROPOLYPHONIE" on "MUSICAL FUTURES"

MikroPolyphonie is a refereed online journal published on the World Wide Web. It aims to encourage scholarly analysis and discussion in any genre of contemporary music making and research. The journal is a continuous publication in that articles are published when they are received and reviewed. Each Issue presents a target topic as a discussion thread. Threads will last for a period of six months with articles contrib-

uted and published over this period. Feedback on articles can be emailed from readers, and then published quickly in proximity to the target articles.

Check out the site at: <http://farben.latrobe.edu.au/mikropol>

MikroPolyphonie is a project of La Trobe University Music Department and the ACOUSMA: Australian Music Research Site. This facility has been made possible through financial assistance from the Commonwealth Department of Employment, Education and Training and the La Trobe Publications Committee.

AMAZING SOUNDS MAGAZINE

In an editorial world still dominated by the printed press, Amazing Sounds has been born with the pioneering intention to reach more people, to inform more and better, faster, and all that thanks to Internet.

From here we invite you to get to know us: we are the first professional magazine to be exclusively found in Internet entirely devoted to the alternative music (New Age, Techno, Ambient, Experimental, World Music, Folk...). Produced by a team of journalists and reporters of a wide professional experience in all kinds of publications in this sector, Amazing Sounds seeks to become an essential reference point for the recording market of this kind of musics. Our magazine not only has a worldwide reach, thanks to Internet, but also it is free for the reader and is written both in English and in Spanish, the most widely spoken languages in the net.

Therefore we invite you to visit us. Our electronic address (URL) in the World Wide Web is as follows:
<http://www.amazings.com>

Here you will find news, articles, a great amount of album reviews, links to other information sources, etc. That is to say, all the ingredients that can be found in conventional magazines, plus many others specifically belonging to the Internet environment. The service is operative since November 2nd., 1996.

Announcement regarding the scheduling and dates of the International Computer Music Conference to be held in Thessaloniki, Greece in September of Spring 1997

1997.

Another conference, hosted by the Inter-Society for Electronic Arts will be held at nearly the same time. The ICMA/ICMC Conference guidelines require potential hosts to research international calendars in order to identify potential conflicts such as this. At that time the ISEA Conference had not been announced so the 1997 ICMC dates were approved. The ICMA regrets this conflict but the situation was beyond the control of ICMA and the organizers of ICMC 1997.

The exact dates for ICMC97 were decided in August of 1995 before the Banff ICMC conference and solidified by contract with the Organization for the Cultural Capital of Europe on January 24th 1996. These dates were mentioned in the preliminary program published by the Cultural Capital on February 1996 and distributed all over Europe. The decisions on dates were made in collaboration with the Organization for the Cultural Capital of Europe so that the ICMC could be co-ordinated with a wealth of other activities that are happening this year in Thessaloniki.

Just a short sampling of those other activities includes:

-The University of Thessaloniki opens on September 1st. Up to that time it is officially closed -even the administration offices are closed- and no operation is possible. (Plus it is too darn hot in Thessaloniki in August)

-The International Fair of Thessaloniki -the most famous annual event of Thessaloniki- starts on September 8th and goes for two weeks. The fair brings to Thessaloniki (a city of 1 million people) about one million visitors. The International Fair finishes only 4 days before the ICMC begins, and hotel rooms will become available for ICMC97 at that time.

-The International Exhibition of Information Systems & High technology Products (INFOSYSTEM) -again an annual event- starts on the 20th of September and finishes on the 24th, just in time for ICMC97 to start.

-On October 1st the Arts Festival Dimitria -another annual event- starts in Thessaloniki and last throughout the month of October celebrating the Saint of the city; Saint Dimitrios.

-In early October also the International

Film Festival starts in Thessaloniki -again an annual event- and takes up all major theaters and many hotel rooms.

Even more exciting than the events taking place just before and after ICMC97, are the events taking place in Thessaloniki at the same time. All these other activities will complement the activities of ICMC97 and offer a multi-faceted artistic experience. Just to mention a few of these activities:

-For the first time ever, the Byzantine treasures of the monasteries of mount Athos will be presented in public at a large exhibition at the Byzantine museum of Thessalonki which is located at a three minute walk from the ICMC97 site.

-Concurrent with ICMC97 there will be in Thessaloniki exhibitions of the drawings of Michelangelo, of the engravings of Goya and a large archeological exhibition with findings from the time of Alexander the Great.

-The National Orchestra of France and the Saint Petersburg Ballet will be also be performing concurrently with ICMC97.

-ICMC97 will coincide with the European telecommunications conference. Crossed and complimentary interests will be exploited.

By carefully selecting the dates, and working closely with local hotels, ICMC97 has managed to come up with a great hotel rate for ICMC97 participants: only \$45 per person per night (breakfast included, air conditioned room, tv, mini bar, double occupancy; please reserve early and pay by July 1st to receive the above rate).

ICMC97 registration rates will also be historically low: \$100 for students, \$200 non-students (for registrations postmarked by June 10th).

ICMC97 will be an opportunity to interact with all kinds of different people beyond the world of computer music. The Exhibition Hall of ICMC97 will be free and open to the public. We expect that many people visiting Thessaloniki will attend any of the activities mentioned in this note will also be stopping by our Exhibition Hall to acquaint themselves with computer music.

RESPONSE TO SOME ARTICLES APPEARED IN ARRAY 16 #1

by Martin Alejandro Fumarola Email: maralefo@turing.fis.uncor.edu

ICMA ARRAY V17, N1

In this letter I express my viewpoints and provide complementary and corrective information with respect to different topics that were referred in *Array* 16 #1, for which I am under the necessity of clarifying and expressing my opinion.

ICMA AND LATINAMERICA

It is important not to attach much magnitude to the existence of a supposed "boom" of computer music in Latinamerica, as stated in *Array* 16 #1. It is truth that some computer music related activities have grown a bit in a few countries of the region -above all in Brazil- but there is still a (sometimes serious) scarcity of professionalism that is not usual in the industrial countries. For instance, the high-level of the papers published in the Proceedings of the XI CIM organized by the AIMI last November in Bologna caused impact to me. This last was not only my impression but also of, for example, the British who launched their own computer music mailing list mainly motivated by the amazing professionalism of the AIMI as a computer music network. The general level of the papers by Latinamerican authors published in the Proceedings of the two already developed Brazilian Symposiums on Computer Music is still far from those papers by European or North American authors appeared in the XI CIM Proceedings and likewise in the Proceedings of the two Brazilian Symposiums. I mentioned the two Brazilian Symposiums on Computer Music only because some people believe (or try to make us believe) that involvement in electroacoustic and computer music activities in Brazil and Argentina started with those events (sic). In my view, such a "boom" in Latinamerica does not exist. Related to that, it has to be reminded that Latinamerica also comprehends countries such as Peru, Ecuador, Bolivia or Cuba, not only Argentina and Brazil! Can be said that a "boom" exists only because of the activities involving people from two or three countries? In that sense is that in *Array* 15 #2 I suggested the formation of a Latinamerican Computer Music Association, because any Latinamerican association should be integrated by practitioners of electroacoustic and computer music not only with enough background in the field but also that are representative or have contacts in most or all Latinamerican countries. Only this would allow that countries working isolated can be more integrated in computer music activities in a regional level. People like

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Ricardo Dal Farra have done a very good job in this sense. He has paid attention to what happens not only in Brazil or Argentina but also in the electroacoustic/computer music scenes in "remote" countries such as Bolivia, Dominican Republic, Ecuador, Panama, Peru, etc. and has reported and reviewed an extensive number of events, recordings, salient facts and so on regarding Latinamerica since very early issues of *Array*. Latinamerican representant(s) of the ICMA should be people who have been involved from a long time in the Latinamerican electroacoustic and computer music scene and who paid attention to what happened in "remote" Latinamerican countries as well. In that pretended "boom" there is plenty of newcomers in the field, who, for example, ignore absolutely the activities held before the Caxambu and Canela Symposiums. To give an appropriate example, I will quote part of what the Argentine Carlos Cerana wrote in his review of the First Brazilian Symposium on Computer Music, which was published in *Computer Music Journal* 19:2. The text is the following: "Despite the ongoing economic integration between the two nations [Argentina and Brazil], interchanges in our specific field were almost nonexistent, but suddenly everything changed. Something was happening on the other side of the border!" Only someone with absolute ignorance of the electroacoustic music past in Brazil and Argentina can have said such a blunder! Electroacoustic and computer music in Brazil has a long and rich history, from much before of the two aforementioned Symposiums. I will submit, as a reply to that paragraph of the review, a summary of the most salient facts concerning both to the Brazilian electroacoustic music scene and to the interchanges between the two countries in the period 1960-92, to be published in CMJ, but, as a brief introduction, I can enumerate the following:

"Simposio Internacional de Compositores en Brasil", held in Sao Bernardo do Campo, Brazil, in 1977. In this symposium several composers coming from different countries participated. It included the excellent lecture "Situacion de la composicion musical en America Latina" by the Uruguayan composer and musicologist Coriun Aharonian.

"Cursos Latinoamericanos de Musica Contemporanea", the last one realized in 1989 in Mendes, Brazil (Eduardo Miranda

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attended it). Fifteen editions of those courses were realized in several Latinamerican countries. All of them included interchanges and integration not only between Brazil and Argentina but also among the majority of the Latinamerican countries. The "Cursos Latinoamericanos de Musica Contemporanea" still remain as the most significant and influential series of events of contemporary music celebrated in the region. The effort of the organizing committee (Coriun Aharonian, Graciela Paraskevaidis, Jose Mara Neves, Conrado Silva and Cergio Prudencio) was enormous (no Internet, no fax, only inefficient snailmail in those years!). Strong compromise with the political and social economic situation of the region characterised the "Cursos Latinoamericanos de Musica Contemporanea".

"Festival Musica Nova", organized regularly in cities of the Sao Paulo state. I attended part of the 1991 edition, in which several electroacoustic works were programmed. Most pieces were by Brazilians but there were some by Argentinians.

"Bienal de Musica de Rio de Janeiro". It featured electroacoustic music by Brazilian composers such as Livio Trachttemberg, Wilson Sukorsky (from Sao Paulo) and Agustin Pantaleao (from Rio de Janeiro), among others. There was also special collaboration of the Gloria Estudio from Rio de Janeiro, which is directed by composer Tim Rescala.

"Bienal de Arte de Sao Paulo". Electroacoustic music has regularly been included although it occupies a relative small place in the general schedule of the Bienal. In the 1991 edition, computer music pieces by Jose Augusto Mannis and Rodolfo Coelho de Souza were performed, and in the 1993 edition, the computer music piece "SP4" by Ricardo Dal Farra was also programmed.

The courses and seminars carried out in the "Fundacao de Educacao Artistica" in Belo Horizonte, Brazil. Both Brazilian and Argentinian composers lectured there. Among the Argentinians, Dante Grela and Mariano Etkin were the most frequent teachers in that foundation. Certain courses and seminars given by Dante Grela referred specifically to Latinamerican electroacoustic mu-

sic.

Radio and TV programs leaded by composer and theorist Flavio Oliveira from Porto Alegre, Brazil. Presentations featured music by Argentinian and Brazilian composers.

The activity of Dante Grela in Brazil. He is the most well-known Argentinian composer of instrumental music in Brazil and lectured and organized activities in all main cities in Brazil. Besides, Dante Grela is also regularly in charge of seminars developed at the National University of the Littoral (Santa Fe, Argentina), in which special emphasis is given to the analysis of pioneer and historical works of Latinamerican electroacoustic music, for example *Humanofona* by Joaquin Orellana (Guatemala), *Ayayayayay* by Mesias Maiguashca (Ecuador) and *Intensidad y Altura* by Cesar Bolanos (Peru). Besides, to electroacoustic pieces by Daniel Pinilla (Peru), Alfredo del Monaco (Venezuela) and Dante Grela.

Pioneer electroacoustic music activities related to the integration and interchanges between Argentina and Brazil were quoted by Coriun Aharonian in his article "Latinamerika idag" published in the Swedish magazine *Nutida Musik* in 1973. Besides, numerous contributions by Coriun Aharonian to the magazines *PAUTA* (Mexico), *LULU* (Argentina) and *Musik Texte* (Germany) likewise concerned specifically to Latinamerican electroacoustic and computer music.

A special issue of the already disappeared Canadian magazine "Derives" that was entirely dedicated to Latinamerican contemporary music, including articles further referring to the activities and the aesthetical viewpoints by several Latinamericans. In some of them, there is direct reference to interchanges between Brazil and Argentina.

The article "Musica dodecafónica y serialismo en America Latina" (1985) by Graciela Paraskevaidis is also of particular significance although it concerns to the general context of contemporary music in the region. The article points out the crucial influence of Hans Koellreutter in Brazil.

The inattention to the mentioned facts implies a serious disregard of the non-recent musical past in Latinamerica. Electroacoustic and computer music practice in Latinamerica started immediately after to that one from Europe and the USA, and in

terms of quantity and quality, the activities that supposedly are the basis of the pretended "boom" have not surmounted to those ones encouraged by and/or developed in the "Cursos Latinoamericanos de Musica Contemporanea", for example.

From an historical perspective, another point to be clarified is that the pioneer contact between Argentina and the CCRMA of Stanford University was realized by Ricardo Dal Farra, who came off well in working there. The piece "Karma" (1986) by Dal Farra was the first one produced by an Argentinian composer at the CCRMA. It reached a very good international recognition not only because of the musical quality itself but also due to the way in which the composer utilized an extension of the Karplus-Strong algorithm to simulate plucked-string sounds. Later, in 1992 he produced there the work "Memorias". He was also the pioneer in contacting CCRMA staff in order to visit and lecture in Argentina (I remember David Jaffe's lecture in September 1988 during the festival "Por la Musica en las Americas" organized by Alicia Terzian. Jaffe's lecture was translated by Ricardo and attended by composers such as Gabriel Valverde and Fernando Lopez Lescano, a special epoch since that was a very hard time for the country and those lectures were a unique opportunity to keep up us updated).

Appart from all that, a crucial factor to be seriously taken into account for any policy in the region is the fact that most national associations of electroacoustic music in Latinamerica have a non-democratic structure, feudal organization and carry out very little activity. The most accurate example of all this last one is the Argentinian National Federation of Electroacoustic Music (FARME).

THE TRUTH ABOUT THE ORIGIN OF THE LIPM

In *Array* 16 #1 there was a serious lack of information concerning mainly to the birth of the LIPM. The names and activities of two transcendental personalities in the Argentinian electroacoustic and computer music scene were not mentioned at all: the composer Jose Ramon Maranzano and the Uruguay-born composer and programmer Ariel Martinez. The foundation and immediate subsequent existence of the LIPM were due only to those two people, who

were the real devisers of the LIPM project. They wanted an open centre for the creation of electroacoustic music, orientation that was discontinued some years later. Ariel Martinez was who suggested the name LIPM (other name would not have been accepted by the government authorities) whereas Jose Ramon Maranzano got essential state-of-the-art equipment to set up the new laboratory because he had key contacts with government authorities and international organizations. Besides, Maranzano was the real deviser of the current La Recoleta Cultural Cultural Center, which was going to be the first one in Argentina aided to be a total musical centre, as in many industrial countries happens. Already existing equipment in the former CICMAT was also removed to the forthcoming LIPM. It is meaningful to point out the importance of Ariel Martinez in the electroacoustic music scene in Latinamerica. He was one of the founding members of the Uruguayan "Nucleo de Musica Nueva" along with Coriun Aharonian, Conrado Silva and Daniel Viglietti. He was the real deviser of the Argentinian Federation of Electroacoustic Music project (FARME) as well. He is the only person capable of teaching electroacoustics in the universities environment in Argentina since he developed a special and unique methodology for that purpose. He has been Professor of electroacoustic and computer music and related subjects in the Argentinian universities of Buenos Aires, La Plata, Cordoba and Rio Cuarto and in the Uruguayan Universidad de la Republica. He is the author of an excellent article (non-published yet), called in Spanish: ? Porque no es posible hacer musica electroacustica en la Argentina? (in En-

glish: Why is it not possible to produce electroacoustic music in Argentina?), which is the most objective description of the castrating environment for the creation of such a kind of music in that country and all the difficulties, problems and risks that institution-based and freelance composers had and have in Argentina. The article further describes the lack of a structural atmosphere to produce electroacoustic music and the way in which this tremendous gap has always been exploited by one certain man in order to avoid the creation of innovative electroacoustic music in Argentina.

MORE ABOUT COMPUTER MUSIC ACTIVITIES IN ARGENTINA:

There were also important omissions in *Array* 16 #1 in the report of electroacoustic and computer music activities that were carried out in Argentina during 1995. I will add only a few ones since it is supposed that *Array* is not a forum to merely list activities related to electroacoustic and computer music but to include the most significant ones. I focused my report from that viewpoint.

Numerous computer music concerts were organized by Escuela Ort Argentina, whose Music and Technology Department is in charge of Ricardo Dal Farra. Several video tapes concerning to state-of-the-art computer music research and developments were showed to the public.

The Music and Technology Department of the Escuela Ort Argentina deserves a special mention since it is one of the few places in the world that is entirely devoted to the high-end training in electroacoustic and

computer music for secondary school students who want to specialize in the field. The Department organizes several annual activities, including concerts, video tapes projections, special classes, lectures, etc. When Chris Chafe visited Argentina he was surprised because of the high profile of the training referred not only to computer music practice, software utilization and recording techniques but also to the history of electroacoustic music starting from scratch that is practised in such a colleague. Indeed there are a very few similar institutions all over the world with such a deepening in the training for our field and mainly devoted to adolescents.

There was also no reference to the existence of the radio program "Musica y Tecnologia", which broadcasts electroacoustic and computer music from all over the world regardless of aesthetics, durations of the pieces, compositional or technological procedures and techniques and so on. The radio program is conducted by Ricardo Dal Farra and is the continuance of the former similar radio programs "Musica Electroacustica y por Computadora" (it started in the year 1988 and continued until 1989), and "Electromusica" (it followed the last mentioned radio program but with a different name from 1990 onwards).

The Encuentros Internacionales de Musica Contemporanea Foundation, led by Alizia Terzian, also organized concerts featuring mixte works by composers such as Alejandro Iglesias-Rossi, who is very well-known in the ISCM environment. He has composed various pieces combining Asian instruments with electronics.

Still Available!

*Back Issues of ARRAY and
Computer Music Journal*

Please email icma@sjsuvm1.sjsu.edu for details.

Regional News

ANNOUNCING THE NEW REGIONAL ICMA VICE PRESIDENTS

Conrado Silva

<http://www.unb.br/vis/museum/conrado.htm>

and

Wolfgang Winkler

<http://www.radio-o.co.at/winklerm.htm>

WOLFGANG WINKLER

Wolfgang is a senior music producer making programmes for radio and television for the Austrian Broadcasting Corporation. He has a professional interest in contemporary music and electroacoustic music and he is based in Linz in Upper Austria, which is the home of the Ars Electronica Center, the Prix Ars Electronica and the Ars Electronica Festival. (The Prix Ars Electronica awards each year what may still be the most valuable prize for computer music.) Wolfgang is closely involved in the organization of all of the Ars Electronica enterprises, which are supported by the City of Linz, the broadcasting company and a number of Austrian companies. He also has links with the higher education sector in Austria.

In the course of his work, he deals with musicians and performing groups of all kinds, including the international superstar set. He has good connections in both West and East Europe. In 1992 he prepared a bid for the 1994 ICMC, but, despite securing commitments of substantial funds from the City of Linz and the regional government of Upper Austria, could not proceed as there was no established organization to which these funds could be allocated. It was from this experience that we have come to realize that it is important for the ICMA to have a formal, corporate existence within Europe.

As a professional broadcaster, Wolfgang will bring to the ICMA Board a new area of expertise and experience.

Austria is probably a good country to site ICMA Europe. It is strategically positioned between East and West and will give ICMA development opportunities in Hun-

gary, the Czech Republic and Slovakia. It also borders Italy and Germany, key countries in the European computer music scene, and has excellent links throughout the continent.

CONRADO SILVA

Conrado Silva was born in Montevideo, Uruguay, in 1940. There, he studied Engineering in Uruguay with specialisation in Acoustics, and composition with Hector Tosar. In 1969, he took up residence in Brazil and started his career as an educator by teaching Acoustics and electroacoustic music composition at the Department of Music at the University of Brasilia. During the 1960s, he attended several courses on composition and workshops worldwide with Stockhausen, Kagel, Ligeti, Pousseur and John Cage.

Conrado is an important figure in Latin America both as a composer and educator. He is one of the pioneers of computer music in Brazil and Uruguay, and, for fifteen years, one of the creators and directors of the Cursos Latino-Americano de Musica Contemporanea (Summer courses on Contemporary Music) held each year in different countries in Latin America.

Conrado's works have been performed and broadcast worldwide. His opera *Espacos Habitados* (Inhabited Spaces), for female voice, actor and live digital equipment was staged in 1994.

He is a founder member and General Secretary of the board of directors of the Sociedade Brasileira de Musica Electroacustica (Electroacoustic Music Society of Brazil) and member of NUCOM (Brazilian Computer Music Society).

SCOTLAND (BY WAY OF BRAZIL...!) CONCERT REVIEW

Review of the Brazilian Electroacoustic Music Concert, Concert Hall, University of Glasgow, Scotland, 21 November 1996

by Kenny McAlpine
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Glasgow University Concert Hall was the venue for a concert of Brazilian Electroacoustic Music. The concert featured works by Victor Lazzarini, Jose Augusto Mannis, Igor Lintz Maues and Eduardo Reck Miranda, with the diffusion of the pieces carried out by Chris McCaig and Eduardo Miranda. The first piece, *Noite*, by Victor Lazzarini is a setting of some fragments of poetry by the Portuguese poet Fernando Pessoa, from the book *Ficcoes do Interludio III, Poemas de Alvaro de Campos*. It begins powerfully, with harsh, broken phrases interspersed with synthesized tones. The heavily treated vocals in this section had a coarse metallic edge to them, which helped to emphasise the power with which the phrases were spoken. The piece became more sedate as it progressed, and by the closing section, both the voices and the synthesized tones had been scaled down to a whisper. This composition-long diminuendo worked well, bringing the piece from its dark, brooding opening to a lighter, more serene conclusion. The next piece, *Cyclone*, by Jose Mannis is a frenzied composition which begins with the creaking and slamming of a door. This is quickly followed by a short burst of computer-generated tones, reminiscent of wind chimes. The frantic nature of the opening continues as the piece develops, keeping the listener on his toes and affording very few opportunities to relax. The central section introduces more harsh synthesized tones and further develops the sound of the creaking doors, and as the cyclone reaches its climax, it moves right around the listener before dying away to nothing.

I found *Cyclone* to be a very entertaining composition. The listener is involved from the very beginning and is carried up on a turbulent wash of noise. The sense of motion was realised very effectively, contributing greatly to the urgency of the piece, as did the rhythmic manipulations of the sonic events.

Antes o Mundo Existia, by Igor Lintz Maues was the third composition on the programme, and contrasted sharply both in style and content from the previous two pieces. It was commissioned for the Planetarium of the city of Vienna, and is based on the temporal sequence of the constellations as conceived by the Indians Desena from the Amazonas. The piece begins at a much more leisurely pace, with bursts of synthesized tones punctuating a deep, rhythmic figure. The feeling of spaciousness

achieved in the performance was quite breathtaking, and one could readily imagine lying back and watching a celestial performance unfold before one's eyes.

The final piece in the concert was *Goma Arabica*, by Eduardo Miranda. The piece was inspired by the adhesive property of gum arabic ('goma arabica' in Portuguese), and demonstrates its heritage in the seamless blending of the four types of sound source used in the piece - the music of the Xingu and Bororo Brazilian Indian tribes; contemporary Western orchestral music; machinery and industrial noises; and computer synthesized sounds. The composition opens to the chants of the Brazilian Indians, before merging smoothly into a computer-generated sequence of notes, which mimics the initial chant. A brisk drum roll follows and leads into a section in which different sound types are blended into one another, all accompanied by the rhythmic figure of the clicking of typewriter keys. As the piece progresses, more synthesized tones are introduced. Some of these have a very harsh sound, while others are more gentle, with an almost organic quality. One particular section reminded me of an old steam train puffing along, as the percussive sounds in the piece were panned alternately right and left. The final section re-introduced the chants and yells of the earlier sections and brought the piece to a sudden, though not unpleasant end.

Throughout, the sound diffusion was first rate. Mr. McCaig, a final year undergraduate at the University, diffused the first three pieces and did an excellent job of manipulating the spatial aspects of the compositions, bringing movement, but not so much as to disorient the listener. Eduardo Miranda was at the controls for his own piece, and thanks to some very expressive slider control, his *Goma Arabica* really came alive, with sounds literally dancing around the sonic panorama. It is always a pleasure to have a composer perform one of his own pieces, and this was no exception.

Overall, the concert was a thoroughly enjoyable affair, and with the promise of further expositions of Brazilian music planned, one which will hopefully be repeated soon.

BRATISLAVA: ICMA MEMBERS' CONCERT

On Thursday, Oct. 17th, FEM 96 Festival
ICMA ARRAY V17, NI

of Electroacoustic Music in Bratislava, Slovak Republic presented a concert of works by ICMA members. These works were selected from works presented at the 1996 ICMC in Kong by rank voting of the membership. One additional work, *Rompido*, by Larry Austin, was included in the concert in recognition of his 1996 Magistere award at Bourges.

The concert program was as follows:

Sin Los Cuatro by Rajmil Fischman (Peru)
Tierra y Sol by Ricardo Dal Farra (Argentina); *Tesla Suite # 2 from NT: The Man Who Invented the 20th Century* by Bruno Degazio (Canada); *TV Scherzo* (for video) by Sung Ho Huang (Korea); *Rompido! SteleMusic and ThunderStone* by Larry Austin (USA); *Inner* by John Young (Australia); *No Pestering* by Mike Frenkel (USA); *And It Flew Upside Down* by Eric Chasalow (USA); *Obsession* by Todor Todoroff (Belgium)

NEWS FROM SOUTH AMERICA

By Ricardo Dal Farra

"IX Festival Latinoamericano de Musica" - VENEZUELA

Months ago, on November of 1995, the "IX Latin American Music Festival" organized by composer Alfredo Rugeles, was held in Caracas, Venezuela. The Festival included a concert of electroacoustic and computer music by Fidel Rodriguez Legendre, Rodrigo Segnini-Sequera, Eduardo Kusnir (born in Argentina), and Alonso Toro from Venezuela, Luis Manuel Alvarez from Puerto Rico, and Fernando Lopez Lezcano and Ricardo Dal Farra from Argentina. Composer Jorge Antunes, from Brazil, presented some of his recent electroacoustic pieces during his lecture at the Ateneo of Caracas.

INFOCOM '96 - ARGENTINA

The computer symposium and exposition "INFOCOM" held in Buenos Aires (Argentina) last June, this year included several lectures on computer music and related topics. Some of them were: "Music, electroacoustic medias and musical education" by Silvia Goldberg; "A virtual world of images and sounds on the computer" by Daniel Burin, Eduardo Nisman and Ricardo Dal Farra; "Music and algorithmic composition" by Guillermo Pozzatti; "Research

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and production of software for spatial sound quality processing" by Emanuel Bonnier and Pablo Di Liscia; and "Music and Technology. Recent developments on the sound's creation field" by Ricardo Dal Farra.

CREAM (Strange + Furman) in ARGENTINA

Allen Strange and Pablo Furman visited Argentina in June 96 to present a concert of pieces produced at CREAM (Center for Research in Electro Acoustic Music): *[MUTE]ation* by Brian Belet, *The Coffee Kings* by Mike Grengel, *Velvet* by Doug Michael, *Velocity Studies IV: Flutter* by Allen Strange, *Wena Wendlovu* by Daniel Wyman, *Umbrae* by Michael Andrade and *Music for Alto Saxophone and Electronics* by Pablo Furman. There was also a lecture at LIPM by both composers.

First Meeting of Spanish-American composers Buenos Aires - ARGENTINA

On July 4, 5 and 6 was held in Buenos Aires the "First Meeting of Spanish-American composers" ("Primer Encuentro de Compositores de Iberoamerica") organized by the Spanish-American Music Council (CIMUS) and SADAIC. Many of the participants were composers with an important production both in instrumental and electroacoustic/computer music, among them: Gustavo Becerra-Schmidt from Chile, Juan Pinera from Cuba, Alberto Villalpando from Bolivia, Blas Emilio Atehortua from Colombia, Alfredo Rugeles from Venezuela, Eduardo Tejada and Carmelo Saitta from Argentina, and Antonio Mastrogiovanni from Uruguay. Next meeting it was announced to be held in Mexico.

Electroacoustic Music Concert, ARGENTINA

An electroacoustic/computer music concert with works by Enrique Belloc and Daniel Schachter was performed by the composers at ICI (Instituto de Cooperacion Iberoamericana) of Buenos Aires, Argentina, last August 1. Some of the pieces included were: *poPierre* and *Suite Acusmatica* by Belloc, and *Fuga tras un objeto oculto* and *Espejos virtuales* by Schachter.

International Electroacoustic Music Concert - ARGENTINA

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Regional News, cont.

During the Encuentros '96 festival held in Buenos Aires there was a concert of electroacoustic/computer music on August 28 including: *Bolivianos ...* by Alberto Villalpando (Bolivia), *Pacific Rimbombo* by Jon Appleton (U.S.A.), *Etude aux chemins de fer* by Pierre Scafeffer (France), *3 Cascadas en transición* Dal Farra.

During the same festival there were presentations by Italian composer Guido Baggiani, and a concert including mixed pieces for bass clarinet and tape performed by Harry Sparnaay, from The Netherlands.

National Rostrum of Electroacoustic Music (ARGENTINA) and International Rostrum of Electroacoustic Music (THE NETHERLANDS)

The National Rostrum of Electroacoustic Music was held in Buenos Aires, in August. Awards: *Syracus* by Daniel Teruggi (1st. prize), *Angelus* by Alejandro Iglesias Rossi and *D'un souffle retrouve* by Carlos Gratzer (shared 2nd. prize), *Fy Mor* by Elsa Justel (3rd. prize), and were given honorary mentions to *Surena* by Pablo Furman and *Arte Poetica (II. Stanza)* by Javier Garavaglia. The jury was integrated by Teodoro Cromberg, Daniel Schachter, and Ricardo Dal Farra. The pieces by Teruggi and Iglesias Rossi were sent to participate on the International Rostrum of Electroacoustic Music held in The Netherlands during last September, where *Angelus*, the composition by Alejandro Iglesias Rossi received the main prize.

Electroacoustic Music Concert ARGENTINA

An electroacoustic/computer music concert was presented on September 28 by composer Claudio Alsuyet, Artistic Director of Cultural Department at Pestalozzi School of Buenos Aires. The program included: *Del Big Bang a la Torre de Babel*, for amplified piano and tape, by Cecilia Candia; *Vox II*, for tape, by Jorge Sad; *Lito*, for clarinet and tape, by Marcelo Delgado; *Arco Voltaico*, for cello and tape, by Teodoro Cromberg, and *Ashram*, for Mukha Veena and tape, by Ricardo Dal Farra.

More Electroacoustic Music ARGENTINA

Gabriel Brncic (born in Chile but now living in Spain), Alvise Vidolin and Roberto Doati (both from Italy), and Eduardo Reck Miranda (Brazilian composer now living in England) were visiting Argentina and presenting ea/cm concerts at Centro Cultural Recoleta during the last months.

Multimedia performance - ARGENTINA
Dancer Isabelle Choiniere was presenting his multimedia piece *Communion* in Buenos Aires on October 5, at General San Martin Theatre.

A highly interactive environment including dance, video, image synthesis, lights and sounds was integrated on this spectacle presented as part of the *II International Video and Electronic Arts Festival*. Alexander Burton is one of the music and interactive system designers of this very interesting work were (wo)man/machine relationship is the key.

Concert/Premiere - ARGENTINA

On October 24 was premiered at the Pestalozzi School of Buenos Aires a major piece by Claudio Alsuyet: *POS-TALES*, for chamber chorus, recitative, flute, french horn, piano, cello, and live processings. The performers were: Rafaela Gunner, Barbara Kusa, Marcela Bianchi, Susana Peon Pereira, Gustavo Marega, Fernando Moruja, Nestor Andrenacci, and Victor Torres, on the chorus; Lucia Maranca, recitative; Patricia Da Dalt, Mario Tenreiro, Susana Kasakoff and Jorge Perez Tedesco, with the acoustic instruments; and Antonio Moliterni, Daniel Miraglia and Marcelo Delgado, on the electroacoustic processings. The direction was in charge of Andres Spiller.

"XII National Week of Electroacoustic Music" - ARGENTINA

From October 21 to 25, 1996, was held the "XII Semana de la Musica Electroacustica" in Buenos Aires, Argentina. More than 30 Argentinian composers were presenting electroacoustic and computer music during the event. The pieces programmed were: *Todo lo que amaron nuestros dias* by Jose Halac, *Arghanum V* by Alcides Lanza, *Concierto para arpa y sonidos electronicos* by Eleazar Garzon, *Ciclopeo* by Antonio Moliterni, *Marimbagenes* by Teodoro Cromberg, *Pianos para piezas* by Edgardo Martinez, *Angelus* by Alejandro Iglesias

Rossi, *Dominium* by Eduardo Checchi, *Callejuelas* by Martin Fumarola, *Fy Mor* by Elsa Justel, *Ya nunca me veras como me vieras* by Jose Mataloni, *Pliegues, borras de humo, sueños* by Carmelo Saitta, *Carrefour* by Carlos Cerana, *Del cuadro a la postergacion* by Patricia Martinez, *Del ser o la nada y esa desesperada busqueda* by Fernando Polonuer, *Evocacion I* by Silvia Goldberg, *Fantasia del sur* by Gustavo Delgado, *Caos en el mundo de las ideas* by Fernando Laub, *Musica para clarinete bajo (variante 3B) 96* by Francisco Kropfl, *Eriales (part IV)* by Jorge Haro, *Seducion y escape* by Pedro Gomez, *Ostinato roto* by Claudio Garbolino, *Rastros* by Gonzalo Bifarella, *La lenta y dolorosa transición de las especies* by Jorge Villar, *Vox I* by Jorge Sad, *Iris en los espejos* by Graciela Castillo, *Voces del recuerdo* by Raul Minsburg, *Espejos virtuales* by Daniel Schachter, *Composicion en tiempo real* by the Imaginary Music Company (Belfer, Candia, Cavalli, Foutel, Labastia, Luchilo, and Mariani), *Planos* by Juan Carlos Figueiras, *Mona Lisa acelerada* by Daniel Miraglia, *Rugosidades del inconsciente colectivo* by Enrique Belloc, and *Tierra y sol* by Ricardo Dal Farra.

New CD by Juan Reyes - COLOMBIA

Equus & Resonancias is a new CD by composer Juan Reyes with a group of works produced using Barry Vercoe's Csound and Rick Taube's Common Music on a Macintosh platform.

Reyes said about his work: "*Equus & Resonancias* is a composition of a series of pieces for computer music and choreography. The idea for this work come from the lines of the stage production of *Equus* by Peter Schaffer. In this spirit the many aspects of multi dimensional perception of the senses in contemporary theatre, were taken into account. Therefore electroacoustic music plus choreography and lighting, perfectly matched the text and the plot of this story. This music is not intended as a document of this historical production but a standalone composition with some points on mind. The sound of breath taking, sounds of voice, movement, fusion of metallic sounds, and expression".

Juan Reyes was born in Barranquilla, Colombia, in 1962. He studied piano and composition at Berklee College of Music, in Boston, and also music and mathematics at the University of Tampa.

SURROUNDWORKS

"the art of being there"TM

Many years ago, the famous acoustician Wallace C. Sabine noted man's primal need to be enveloped by sound: "Since ancient times, man has been fascinated by the echoes and reverberations of cathedrals and caves." Yesterday's cave is tomorrow's home theater. With the Digital Video Disc's (DVD) discrete multichannel audio specification due to arrive in 1997, surround sound will replace stereophony in the next millennium.

SurroundWorks archives acoustic and electroacoustic music **AMBISONICALLY** by means of the Nagra 4-channel, 24-bit digital recorder. In order to sample a space ambisonically, a special microphone called the "Soundfield" is employed which contains a tetrahedral array of 4 capsules whose respective outputs are matrixed to produce the following polar responses: an omni pattern, a forward-facing figure-eight pattern, a side-facing figure-eight pattern and an upward-facing figure-eight pattern. Both incidents of sound- pressure and velocity (in 3 dimensions)- are sampled at a single point (A stereo mixdown can be had from the ambisonic master while archiving the 360 degree soundfield until the day when it is commercially practicable to release it in its full surround glory via the DVD). By means of no less than 4 loudspeakers positioned in a symmetrical layout, the full 360 degree horizontal soundfield can be reproduced; however, ambisonic decoders can accommodate any loudspeaker array, eg., pentagon, hexagon, octagon, etc. in this respect, ambisonics differs from all other multichannel systems designed to employ, a fixed number of loudspeakers, eg., Dolby 5. 1. Digital and analog decoders are currently available for use in virtual reality presentations, museum exhibits, live sound reproduction, and theme parks.

Though ambisonics is not quite like the real thing, it's close enough to pretend! To quote its principal inventor, mathematician Michael Gerzon, "as it is the first system design based on a complete mathematical analysis of both system theory and human psychoacoustics it is possible to say with some confidence that no system appreciably different from it can exceed its performance in optimal surround-sound decoding, so that no further system change is ever likely to be needed for horizontal encoding." In short, ambisonic technology provides the most convincing and palpable illusion of "being there."

Please contact me should you desire further information about ambisonic production or reproduction. I welcome all surround sound enthusiasts to join an internet listserv called "sursound." Please e-mail me to receive the subscription information.

Jeffrey Silberman

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"II Latinamerican Meeting of Electroacoustic Music" Brasilia - BRAZIL

On April/May of 1997 will be held in Brasilia, Brazil, the "II Latinamerican Meeting of Electroacoustic Music" organized by composer Jorge Antunes. This international event will include ea/cm concerts, lectures and round-tables.

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News reported by Ricardo Dal Farra

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RESEARCH ON PSYCHOACOUSTICS AND MUSIC

ICMA ARRAY V17, N1

THERAPY IN CENTRAL AMERICA: INSTITUTO PSICOSONIA, Inc.

Instituto Psicsonia, Inc. is an independent institution with a wide variety of activities mainly focusing on psychoacoustics research and music therapy. The subject "Music and the Brain" takes up a priority place. Instituto Psicsonia, Inc. is directed by the composer and researcher Alejandro Jose, who was born in the Dominican Republic and now resides in Puerto Rico.

Last research projects concerned applications of sound to the improvement of brain working. Methods to cure including computer-processed sounds of human voices are continuously investigated as well as how music perception can affect emotional states. In this sense, Instituto Psicsonia, Inc. has done an extensive contribution to the link between

psychoacoustics, computer-processed sounds and music therapy in the Central America region, where most research activities realized in Europe and North America are unknown. The institution carries out most of its activities under the motto: "the work of human brain can be trained through sounds".

Alejandro Jose organized the MIME festivals of electroacoustic and computer music in Central America, which were attended by Max Matheus, Adolfo Nunez, Ricardo Dal Farra, Neil Leonard, Chris Chaffe, John Chowning, Vivian Adelberg Rudow, Paulo Chagas, and others. Two compact disks containing electroacoustic and computer music of those events are going to be launched very soon. Alejandro Jose also attended several CCRMA workshops on Psychoacoustics, Psychophysics, and Virtual Reality.

Instituto Psicsonia's address is as follows:

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Santurce, PR 00911
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Loiza Street Station,
San Juan, PR 00914-6728
Phone and Fax: (809) 726-5507

NEW COMPUTER MUSIC BOOKS FROM SPAIN

In the last few months several Spanish-written books dealing with different aspects of electroacoustic and computer music have been launched. They refer to several different topics, including multimedia, mixte works, MIDI, pedagogical applications, etc. They are published by the main editorials in Spain, and this fact has consolidated Spain as the leading country in all Spanish-speaking world in the field of electroacoustic and computer music publications. The complete list of those books is the following:

SGAE Editions: *Sintesis de Imagen y Sonido* by Xavier Serra; *La Composición Informática* by Adolfo Nunez; *La Educación Musical y la Informática* by Gabriel Brncic. Two additional titles: *Lenguaje y Sintesis* and *La Musica Mixta* are going to be released in the near future.

ARS FUTURA Editions: *Musica Virtual* by Martin Rasskin; *Tarjetas de Sonido: Sound Blaster* by Martin L. Moore

GRUPO EDITORIAL JACKSON Editions: *Técnicas de Interfase MIDI* by G. Perotti

IORTV Editions: *Introducción al Sonido y la Grabación* by Francis Rungery-McCormick; *Técnicas de Grabación Sonora* by Manuel Recuena Lopez

ESCUELA DE CINE Y VIDEO Editions: *El Manual del Audio* by Stanley Alten

NEWS FROM ASIA

Inter-College Computer Music Concert at SIGMUS meeting in Kunitachi

Shuji Hashimoto

The Special Interest Group for Music and Information Science (SIGMUS) of the Information Processing Society in Japan (IPJS) is one of the most important computer music groups in Japan. SIGMUS holds scientific meeting almost every two months including the summer symposium. Five to ten papers are presented at each meeting. Sometimes the demonstrations and concerts are held along with the paper sessions, which looks like mini-ICMC.

The SIGMUS meeting held at Kunitachi College of Music, Oct. 19-20, 1996 was a special. Takayuki Rai, the local arrangement chair, organized the second Inter-College Computer Music Concert in which works by students from many different universities were performed, including representatives from Yokohama National University, Kunitachi College of Music, UCSD, Waseda University, Osaka University of Arts, Keio University, Tsukuba University and Kyoto College of Arts. 26 musical pieces, 8 CG videos and 2 sound installations were successfully performed and related technical presentations and studio reports were given at the paper sessions. Takayuki Rai organized the first concert in 1995 which was also successful and exciting. I hope this concert will be held every year regularly to encourage computer music students by giving them performance opportunities, and the chance to inspire one another

SOME NEWS FROM EASTERN EUROPE - THE LIFTING OF THE IRON CURTAIN: THE CZECH AND SLOVAK REPUBLICS

Libor Zajicek
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[1] Since the collapse of communism in Eastern Europe at the end of the 1980s and the beginning of the 1990s, the West has finally had free access to a fifty-year long hidden history. For the electroacoustic music community, this also includes the history of electroacoustic music: a history that includes both parallels and differences to events of the West. So when Allen Strange named me as the ICMA's new Eastern European Correspondent in January and asked me to write articles on some Eastern European electroacoustic music news, I was not only thrilled because I could elaborate on

my article in *Leonardo Music Journal*, "The History of Electroacoustic Music in the Czech and Slovak Republics" (vol. 5, 1995, pp. 39-48), but also because I could use this forum as a means of explaining the history to somebody orally: the telling of a story. And what a story it is — and continues to be. Let's lift that curtain.

[2] There are several important facts that one *must* realize. For one, perhaps unlike in the West, the fate of electroacoustic music in Czechoslovakia was inseparably linked to the political situation [a]. The decade-and-a-half after WWII, Due to the establishment of a strict, communist regime, the decade-and-a-half after World War II was NOT a period for initial electroacoustic music experiments in Czechoslovakia. When Eastern European political leaders witnessed the riots against communism in Budapest in 1956, they realized they had better "loosen things up" or that sort of thing would happen in their own back yard. Thus, the 1960s were a much more tolerant and open decade conducive to a more free exchange of information. In fact, it was so tolerant — Dubcek was really a Gorbachov two decades ahead of his time — that Moscow sent in the Warsaw Pact armies into Czechoslovakia in 1968 to "re-establish" what it called a normalization period! This overthrow initiated a renewed period of totalitarianism from c.1970 to 1989, when communism was finally overthrown: the Revolution of 1989, as it is known in the Czech and Slovak Republics. So for Czechoslovakian electroacoustic music, these events meant the following: The first experiments — and perhaps all the significant musical developments — happened in the 1960s, the most active and fertile period, and they really happened due to the impetus of one composer: Miloslav Kabelac. His visits to Schaeffer's studio at the end of the 1950s and the beginning of the 1960s, and the great interest of a young generation of composers in electroacoustic music, led Kabelac to form a seminar on his findings at the Czechoslovakian Radio in Plzen in 1964: First Seminar of Electronic Music. This seminar was really the stimulus for all of the succeeding electroacoustic music activity. In conjunction, Slovakian composers' interests were also great, and thus they already established a studio (Experimental Studio) in 1964 at the Czechoslovakian Radio in Bratislava. In fact, all studios were established in the 1960s, and as in the West for the most part, were housed in

institutions and not in homes; in this case, the web of the Czechoslovakian Radio. The Experimental Studio in Plzen was created in 1967, BES (Brnenske elektronické studio/Brno's Electronic Studio) in 1964 (but closed in 1970), the Experimental Studio in Bratislava <<http://savba.savba.sk/logos/mca/cecm.html>> in 1964, and the studio in Prague was briefly operational during the 1960s. (Curiously, in many ways Prague was not the center of Czechoslovakian electroacoustic music as perhaps Paris was in France.) The 1960s also witnessed Prague visits by Hiller (around 1960); Cage, Rauschenberg and Cunningham (1964); Schaeffer, Reibel and Bayle (1966); and Koenig, Tempelaars and Weiland (1969), all in an effort to exchange information on electroacoustic music developments. From 1968 to 1970 in Smolenice, just north of Bratislava, the International Seminars on New Music were organized, in which Stockhausen, Ligeti, Kagel, and Lutoslawski participated. Rudolf Ruzicka composed algorithmic compositions with the aide of computers, and the first electroacoustic music competition, MUSICA NOVA, was formed in 1969. Furthermore, musicologist Dr. Vladimir Lebl developed, perhaps, some of the earliest means of analyzing electroacoustic music which were praised by Schaeffer during his visit. And in 1971 Herzog translated Schaeffer's *La Musique concrete* into Czech using an alias.

[3] All of these fruitful activities came to a rude and sudden crash with the invasion of 1968. This meant that the 1970s and the majority of the 1980s were an extremely suppressive period for the development of Czechoslovakian electroacoustic music, a period during which electroacoustic music was practically an outlawed and illegal art form. Therefore, almost no electroacoustic music could be broadcast; studios were either closed (i.e., BES) — certainly no new studios were established — or their position in regards to the production of electroacoustic music was realigned; foreign contacts vanished; and the production of compositions diminished, was censored, and had to be cleverly disguised as other art forms. All persons who I am in contact with echo this sentiment — and perhaps would add harsher words!

[4] Two very good questions that one may ask are, what instruments did they have/use during the presence of the Iron Curtain; and if this stiffened the development of electroacoustic music, what style(s) was the

music? Besides having some foreign instruments — i.e., Studer tape recorders, Bruel & Kjaer tone generators and filters — these studios were also outfitted with Tesla mixing consoles and instruments from VURT (Vyzkumny ustav rozhlasu a televize/Research Institute of the Radio and Television). This research facility built electric equipment, anything from television cameras to mobile recording vans to recording gear. So, relevant to electroacoustic music, VURT built filters, tone generators, amplifiers, variable-speed tape recorders, a synthesizer that was basically a Minimoog, and a keyboard synthesizer. (One of these refrigerator-sized generators was recently liquidated at JAMU [Janackova akademie muzickych umeni/Janacek Academy of the Performing Arts] in Brno, too late for me to save it! I don't know of another still existing.) Due to the "closed door" of the 1970s and 1980s, Czechoslovakian electroacoustic music was bypassed by western computer synthesis developments and MIDI. MIDI did not really arrive here until after 1989. Thus, the music has basically remained in a "new" *musique concrete* style.

[5] So what about developments since 1989? Not only have they been both positive and negative, but they are now governed not by political circumstances, but by financial woes. (Welcome to the real world!) Twenty-nine years and 119 compositions later, the Experimental Studio in Plzen closed its doors in July 1996 and the space was rented to commercial companies due to the station's director deeming it as "unprofitable." Studio F, the electroacoustic music studio at the Czech Radio in Prague operational since 1988/89, is currently, sad to say, the only electroacoustic music studio operational in the Czech Republic. Obviously, there is once again an unobstructed means towards the dissemination of electroacoustic music, be that radio broadcasting, concerts or the publishing of CDs. Composers Karel Odstrcil and Ruzicka formed SEAH (Spolecnost pro elektroakustickou hudbu), the Czech Republic's Society for Electroacoustic Music currently fifty-eight members strong and a member of ICEM. (I am its Administrative Assistant.) Last year SEAH released its first CD — the newest music — and will release a second one later this year. SEAH is now responsible for the organization — originally organized by the Czechoslovakian Radio in Plzen — of MUSICA NOVA,

now in its seventh year <<http://www.vol.cz/sdmusic/CZMIC/compet.htm>>. SEAH also organizes concerts (i.e., the Premie series) and publishes a newsletter. The Experimental Studio in Bratislava, the studio that has its act the best together (the person to contact there is Juraj Duris <duris@mbox.bts.sk>), has already released two CDs of its music, and organizes FEM (Festival elektroakustickej hudby/Festival of Electroacoustic Music), now in its third year. But perhaps a great problem facing both Czech and Slovakian electroacoustic music is the small number of young composers involved. Unlike the enthusiastic generation of the 1960s, today's young composers do not express such interest. The reason is due to the music education institutions' inadequate roles in teaching this genre! There are only small programs offered at HAMU (Hudebni fakulta, Akademie muzickych umeni/Music Department, Academy of Performing Arts) <<http://ns1.h.amu.cz>> and JAMU. The few composers of my generation (thirty-five and under) who I know are Vit Zouhar <vzouhar@iem.mhsg.ac.at>, Jaromir Navrat <navrat.amu@vsb.cz>, and Ladislav Firsov of the Czech Republic, and Marek Zoffaj <marek@viktoria.drp.fmph.uniba.sk>, Pavol Smetana <smetana@calva.net> and Peter Vazan of the Slovak Republics. In conjunction to writing my Ph.D. thesis, *Compositional Techniques of Czech and Slovakian Electroacoustic Music*, I am also putting together a complete archive of Czech and Slovakian electroacoustic music.

[6] In upcoming issues I will keep you informed not only of events happening here, but also of what's going on in other Eastern European countries. A quick look into Folkmar Hein's studio catalog shows studios in Warsaw, Krakow, Budapest, Moscow, and Belgrad. I am also about to make contact with Bor Turel of Slovenia, and I know that there is some activity going on in Bulgaria. I wonder what interesting information the raising of the iron Curtain will reveal from those countries.

Endnotes

[a] I will refer to 'Czechoslovakia' as the single country existing up to 1993, and to the 'Czech' and 'Slovak Republics' existing thereafter. Furthermore, musicologist Dr. Vladimir Lebl developed, perhaps, some of the earliest means of analyzing electroacoustic music which were praised by Schaeffer during his visit.

Latency in Computer Music Systems

By
Roger Dannenberg and Masataka Goto

In an earlier Array article ("The Platform Blues or Looking for Mr Real Time", Array V16, N1), the first author and his colleagues discussed some issues of selecting a platform for real-time interactive multimedia performance. In this follow-up article, we present a short tutorial on latency and some new measurements of Microsoft's NT and SGI's Irix systems.

Any interactive computer system must respond to input. The response can be slow (Web users know all about this) or very fast as in a keyboard synthesizer. Since musicians often want very fast response compared to what operating systems can typically guarantee, response time is an important issue for many of us. The term "latency" means simply the delay or response time of a computer system. There are many types of latency, but for now, consider the total delay from analog audio input to analog audio output.

What causes latency? There are many steps from audio input to output, and each one makes a small contribution to the total latency. First, the analog signal is digitized. This involves a low-pass filter with some delay, a sample and hold circuit, and probably a result register, so there can be a couple of samples buffered in the A/D circuitry. Next, data must be transferred to memory, typically via direct memory access (DMA), which means that samples are transferred automatically from the A/D to a block of memory. Software typically processes audio in small blocks rather than one sample at a time. Since processing does not start until a complete block of data has been stored in memory, there is an additional latency of one block of samples. Next, samples are processed. It is reasonable to assume that the processor will be heavily loaded by audio processing, so processing will take approximately the duration of a sample block. Now data must be transferred to the D/A via DMA. Before the DMA begins, we need a block of samples, so add another block of samples to the latency, and add another couple of samples

for the D/A circuitry.

The total latency so far is the duration of 3 blocks of samples plus a few more samples in the A/D and D/A. Software systems typically work with block sizes of 32, 64, or even more. At a 44.1 khz sample rate, 32-sample blocks gives us a minimum audio latency of 2.3 ms. There are ways of streamlining the input and output to reduce this even further. In practice, however, systems like Microsoft's NT or Win95 and SGI's Irix do not come close to delivering this kind of latency. For example, Microsoft claims 20 ms of delay for their DirectSound audio mixer feature, and this does not even include audio input. One reason is that 32 is a very fine-grain transfer; typically the A/D and D/A interfaces transfer much larger blocks of samples, and these add to the latency.

So far, all this assumes that the processor is available whenever it is needed. In reality, processors do many things "concurrently" by switching among various pending tasks. If it is time to compute some audio but the processor is busy dealing with an incoming network message, there may be some delay before the processor can start to work on audio. This delay, which we will call "OS latency" must also be added to the total. In effect, what happens is we make a large output buffer and keep it filled with samples. To a first approximation, the output DMA transfers happen without processor intervention, so if the processor is busy doing something else, the output buffer will just continue to empty. There will be no interruption of sound if the buffer is big enough. Meanwhile, input samples will be filling up input buffers. When the processor becomes available, the audio system will catch up by transferring and processing input to output.

Thus, the OS latency is a component of the total audio latency. Buffers must be large enough to cover the OS latency or else there will be a gap in the audio output.

How can we measure OS latency? Our procedure is to output a stream of MIDI messages at a rate of 100 messages per second. We measure the delay between messages. Ideally, it should be 10 ms, but if there is any OS latency, we will see

longer delays. We report OS latency as the maximum interval minus the expected 10 ms. Previously, NT's OS latency under certain conditions was reported as 30 ms. Since then, we have upgraded to NT 4.0, and found some improvement. We are observing less than 20 ms OS latency on a 60 mhz Pentium with MIDI I/O, a compute-bound Open GL screen saver, some file I/O, and occasional process creation. However, the latency can be much higher with the network enabled. (In NT, a considerable amount of network processing is performed at a priority that is higher than that of any user-level process.) Timings may be better with a faster machine, and network performance may improve with different network devices, drivers, and configurations.

One of us (Goto) also measured latency using an SGI Indigo2 Extreme (R4400, 250MHz) computer as a MIDI sender and an SGI Indigo2 High Impact (R4400, 250MHz) as a Midi receiver. Both ran IRIX 5.3. His measurements indicate less than 5 ms of OS latency, even with heavy calculations, file access, process creation, and animations running. There are operations and programs that generate higher latencies, but it appears that these could be avoided in a critical performance.

What can we conclude? First, minimum audio latency is the sum of two components: latency due to sample buffers and latency due to the OS. Microsoft's advertised audio latency of 20 ms should be regarded as false because it is less than the OS latency in even a fairly gentle test. Could Microsoft be reporting the best case or typical case rather than the worst case? We have been unable to achieve anything close to 20 ms, but DirectSound drivers have just become available for NT and it is not clear that DirectSound is actually working properly in our configuration. Eventually, we hope that a latency consisting of 20 ms for input, 20 ms for OS latency, 20 ms for output, and 5 ms for additional buffers will enable a 65 ms audio latency, and that this number will improve in future versions of NT.

SGI systems seem to have a moderate OS latency and a good audio buffering implementation. Together, it appears that reliable audio latencies of well under 20ms should be possible in SGI systems, and this corresponds to reports from CNMAT, although we do not know the details of any

Careful testing.

Meanwhile, Apple has announced that NextStep will be the future Macintosh OS. As reported in our previous article, NextStep is derived from Carnegie Mellon's Mach 2.5, on we have measured OS latencies of hundreds of ms, even with some scheduling

enhancements that are lacking in NextStep. Also Be, Inc. reports realtime performance on Mac and, in the future, PC hardware, and various Unix systems are available with reportedly good realtime performance. These systems may be limited by the availability of MIDI, audio, video, and graphics devices and drivers.

We hope all manufacturers will address audio latency problems in future products. We hope to report again on future progress and findings. Readers are invited to join us in characterizing hardware and software systems by sending email to rbd@cs.cmu.edu.

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Reviews

CD REVIEWS

The Seven Wonders of the Ancient World
A Concerto for Radio-Drum-Performed
Piano and Ensemble
by David Jaffe

Andrew Schloss, Radio-Drum Soloist
(Well Tempered Productions, WTP 5181)

In contrast to most of the pieces reviewed herein, David Jaffe's "The Seven Wonders of the Ancient World" contains no computer generated sound whatsoever. Instead, the piece uses a computer to track the movement and attack of the batons which are connected to a Mathews/Boise Radio Drum, and then, by means of MAX patches, to process the serial signals sent by the Radio Drum and send MIDI to a Yamaha Disklavier. The resultant sound is, therefore, unadorned acoustic piano. Along with the solo instrument, the concerto is scored for the highly colourful ensemble of harp, mandolin, guitar, harmonium, harpsichord, bass and two percussionists. The work is divided into seven movements, totalling about seventy minutes of music, and is the outcome of four years of research, composition and collaboration with the percussionist Andrew Schloss. Each movement takes its title and inspiration from one of the Seven Wonders of the Ancient World: The Great Pyramid, The Hanging Gardens of Babylon, The Statue of Zeus in the Great Temple of the Sacred Grove, The Colossus of Rhodes, The Temple of Artemis, The Mausoleum at Halicarnassus and The Pharos of Alexandria respectively.

Jaffe's idea for this piece was to map percussion gestures onto piano sonorities, and although treating the piano as a percussion instrument is by no means a new idea, controlling the disklavier with what is essentially a percussion instrument certainly gave the composer some interesting and previously-unrealisable ideas to explore, as is evidenced by this recording. Perhaps the greatest compositional problem presented by pursuing this idea was how best to combine the essentially unnotatable radio-drum part with the traditionally notated instru-

mental parts. Jaffe seems not only to have solved this problem by utilising structures which alternate semi-improvised solo with fully-notated ensemble sections, but he has also devised several very effective semi-aleatoric sections where ensemble and soloist interact in an ad libitum manner, combining to form a mosaic of highly varied yet cohesive musical ideas. In the hands of a less-skilled composer, such techniques could create a very undirected, chaotic composition, but this is not the case in this work. In the uniting of an often eclectic mix of musical styles, Jaffe never loses sight of where the music is heading and, though it may migrate to areas far distant from where it began, there is always a logic behind the development and presentation of ideas, an interesting exploration of the different material's interactions, and a realisation of the potential for resolution that these conflicting styles present.

Nowhere is this plurality of styles more apparent than in the fifth movement (which Jaffe describes as "... the climactic centerpiece of the entire work, ... an unbridled ecstatic celebration of this goddess [Artemis] of wild animals ...") which combines jazz with pop and folk music from various parts of the world. Still, though I concede that this is not just a mish-mash of unrelated but fashionable musical references (as with some music of this aesthetic disposition), I was uncomfortable with several parts of this movement. In particular, the overly sentimental piano solo at 9'45" and the incessant dotted rhythm of the kick drum in "street-samba" style at 12'18". I cannot claim, however, that these sections are badly composed or executed, as my discomfort is prompted solely by matters of taste. Moreover, there are plenty of moments at which I was very taken with this movement, for instance the wild xylophone playing that is overlaid onto the samba-like drums, and the interaction of the ensemble with the pointed, staccato piano chords that seem to be the grout that holds this mosaic together.

None of the other movements are as ambitious as this "climactic centerpiece," either in scope of musical material or in the length

of their development (the movement runs almost eighteen minutes), but there are many points of interest elsewhere. For instance, the beautifully effective quiet ostinato ending of the third movement, the cluster of piano trills that is the hallmark of the fourth movement, the percussive, decaying piano attacks of the seventh movement. Perhaps what I find most dissatisfying about the concerto as a whole is the use of cascading glissandi in the first movement, simply because this is a cliché of MIDI music. Jaffe's concerto succeeds most often when he exploits the rich timbres of his strange ensemble (as in the atmospheric and double-bass dominated opening to the sixth movement), or when he fully realises his original premise of writing percussion music for the piano, as is the case at numerous points throughout the work. Though some of the pre-defined algorithms and MIDI sequences do sound at home within the context of the instrumental ensemble (for instance the "metrical grid" section of the third movement, at 6'06"), others tend to sound more mechanical (for instance, the "endlessly descending chromatic scale" of the sixth movement at 6'44") and suffer from the lack of spontaneous improvisational direction we find in some of the more successful sections.

Even with my misgivings though, I still find this work engaging. It is superbly recorded and executed by the players and represents a major achievement by the composer. Andrew Schloss in particular gives a terrifically inventive and assured performance of the solo part, and it is quite obvious that his skill as an improviser enriches the recording throughout. Whether you like the music or not, David Jaffe has a very distinctive and original musical style, and there can be no doubt as to the clarity and technical mastery with which he expresses his ideas.

Reviewed by Michael Edwards, East Palo Alto, California

Roger Reynolds, "ElectroAcoustic Music"
New World Records, 701 Seventh
Ave., New York, NY, USA 10036,
(212) 302-0460 (New World 80431-2)

John Fonville, piccolo; Edward Harkins, trumpet; Philip Larson, vocalist; Regina Mushabec, cello; Jven Schick, percussion; Kayoko Shiraishi, as Dionysus; Members of the Suzuki Company of Toga. Texts by
ICMA ARRAY V17, N1

Euripides and Tadashi Suzuki.

Roger Reynolds is an American composer whose work crosses many boundaries. A winner of the Pulitzer Prize in music composition, he was trained in the 1960s as both a musician and a scientist at the University of Michigan where he was a member of the legendary avante-garde ONCE Group. In 1971 Reynolds founded the Center for Music Experiment at the University of California, San Diego where he has been a member of the faculty since 1969. His main influences as a composer are the American experimental tradition and the second Viennese School. Reynolds has been involved extensively in multimedia and theater and this CD comes directly from his experiences in both of these idioms.

Reynolds is a composer who is often difficult to characterize since his musical interests are very broad. The music on this CD, *The Ivanov Suite* (1991) and *Versions/Stages* (1988-91) are multi-movement electro-acoustic pieces which use virtuosic instrumental performances as their basis. This is apparently where the similarities end. *The Ivanov Suite* was written as music for the stage, for a collaboration with the Japanese experimental theater director, Tadashi Suzuki. *Versions/Stages* was written to explore the question, "Can you actually hear a form apart from the sounds that illuminate it or give it life?". In short, is form and content in music really inseparable? These pieces are very different, yet at the core there is an identifiable soundworld and approach that makes them obviously the work of a single composer.

The Ivanov Suite is in seven movements; I. Trumpet Dream, II. The Scream, III. Religious Music, IV. The Brides, V. Piccolo Dream, VI. Monogatari ("Stories"), VII. Primitive Music. According to the excellent program notes by Mark Swed, Tadashi Suzuki wanted only three specific things in the music for the play; a Japanese pop tune, religious music and primitive music. The composer organized the music into polar pairs. The religious music, which is the most "electronic" of the suite with its use of sampled violin, is paired against the primitive music which is essentially a piece for panned drum ensemble. The stretched and spatial "Trumpet Dream" contrasts with the intense, fragmentary "Piccolo Dream". "The Scream", which uses (what else) a scream (which both terrified and delighted

ICMA ARRAY V17, N1

my three children) contrasts with "Monogatari" (Stories) with its single word stretched to three minutes. Standing at the center is "The Brides", a text piece, which at 1'32" is the shortest movement. "The Brides" we are to understand, is paired with the Japanese pop tune which does not form part of this suite. The two pieces which form each pair share obvious timbral affinity and are also temporally matched with roughly equal lengths.

The Ivanov Suite is a beautiful, mysterious and sonically compelling piece of music. The transparency of the computer processing of the acoustic material is truly virtuosic in an unusually organic manner. The music sounds like what one would produce if acoustic instruments and voice were capable of live hyper-instrument tricks. In fact, the first time I listened to this disc I kept waiting for a burst of "computerism", huge extensions of the range, tempo or dynamics. What I heard instead was a music of great richness and subtlety with the computer enhancing and extending instrumental sonorities in a very natural manner. This approach is truly fascinating and masterful.

Versions/Stages is in five movements; I. Cello Dream, II. Dionysus, III. Waterfall, IV. Farewell Cult, V. Ocean. A similarity to the source material in the *Ivanov Suite* is obvious from the titles. Cello Dream is an excerpt from the composer's Cello Concerto. In Dionysus, a Japanese actress speaks from Euripides' "The Bacchae" pairs with "Waterfall", Suzuki's text for "The Brides" from the *Ivanov Suite*. The concluding two movements use natural sounds, waves hitting a beach in movement four and a trickling sound of a waterfall in movement five. Each movement is approximately five minutes long. Time expansion is used to extend a one minute source into a five minute movement. All five movements share an identical form based on fixed events which occur in a set space and time. The composer's intent is to produce five pieces of differing material with an identical form. In doing so he wishes to determine if form can be separated from content.

The sonic world of *Versions/Stages* is very diverse, well organized and sonically sensual. To my ear it is also a bit cold and (forgive the pun) formal in nature. I felt held at an arm's length despite the lushness

Spring 1997

of the sound sources. Part of this may be, despite a very natural pairing with the *Ivanov Suite*, the fact that they share very similar, sometimes identical source material. This is very abstract music and the naturalness of the acoustic material tends to reinforce this aspect of the pieces. I hasten to add that this is wonderful music, yet I have a bit less affection for it than the *Ivanov Suite*.

I highly recommend this recording to anyone interested in the use of computers with music. The production is clear and lush and there are no seams sonically. My only complaint with the production is that occasionally, most notably in "Primitive Music" from *The Ivanov Suite*, the use of panning becomes predictable and somewhat distracting. The acoustic performances which constitute the source material are nothing short of astonishing. Bravo! I had intended on loaning this disc to a friend of mine but I think now that he'll either have to buy his own or pry it out of my hands by force. I can't think of higher praise.

Reviewed by Peter Terry, Bluffton, Ohio

Peter Terry is an American composer and performer of acoustic and electro-acoustic music. For more information about him and his ensemble, Electro-metamorphosis, check out his web pages at <http://www.bgsu.edu/~pterry>

Alan Lamb
Primal Image

Archival Recordings; Wire Music
Total Time: 46' 27"
Dorobo 008

Dorobo
P.O. Box 22
Glen Waverley
Victoria 3150
Australia

Fax: 61-3-97560341
email: dorobo@werple.net.au

This is a wonderful disc. One thing that it isn't, is computer music - no matter how one defines the term. Electroacoustic music it certainly is, and yet, at the same time, environmental. Let me explain.

Alan Lamb has recorded the sounds made by the vast lengths of Australian telephone cables as they oscillate in the wind. The

two works on this disc, *Primal Image* (1988) and *Beauty* (1986), were mastered from his original analogue recordings made between 1981 and 1988. With the exception of equalisation, no processing at all has been applied to the recorded material - just a lot of careful, artistic editing. The end result is two pieces of great beauty and fascinating power.

In the sleeve notes, Lamb explains the genesis of wire music and, whilst this knowledge is not required for enjoyment of the pieces, I find it hard to imagine a listener who will not almost immediately want to know how the sounds are produced. I summarise slightly:

In very long wires which are also very thick, the fundamental oscillation is well below 1Hz and only the higher harmonics fall into the auditory range. The very high harmonics become so crowded that they beat together, creating second-order frequencies also in the audio range. In effect, relationships to the fundamental are lost and it becomes more useful to consider the length of wire as a family of interacting segments, each with its own fundamental. This creates the choir-like quality of wire music, in which the sound is made up of numerous 'voices'. Dominant harmonic patterns can become established, as segments combine in the coherent sets possible in any given wind/wire condition, giving rise to crescendos of over 120dB. As the wind shifts or the wire tension alters, coherence is lost and oscillation dies down until a new pattern starts to emerge. High-order, low-frequency beats generate an equivalent complexity of rhythm and pulsation.

In addition, there are striking points of articulation which I can only assume are caused by birds or insects landing on or jumping off the wires!

The sound material of these pieces is reminiscent of early analogue synthesis - which is scarcely surprising, given its origin in what must be one of the earliest forms of sinewave generation and addition. The two works on the disc are long - 29 and 17 minutes - and they develop in a leisurely and yet compelling manner, reaching a

series of climaxes of increased timbral and dynamic complexity. Whilst comparisons are not always useful, the nature of these pieces reminds me of the large-scale unaccompanied choral works of the European Renaissance or turn-of-the-century Russian Orthodoxy in their rich diversity within the constraints of a fairly narrow sound world.

The editing is superbly clean and seamless and, technically, the only drawback is the noticeable tape hiss from the source recordings. This is only obtrusive when listening through headphones and is, in any case, a small price to pay for such stunning sound material.

Would anyone care to lend me a contact microphone? I'm off to look for some telephone wires!

Lisa Whistlecroft

Lisa Whistlecroft holds a degree in music and physics and has worked as a music tutor in adult education and as an electronics technician. She is currently involved in the use of IT in university music teaching. After several years as an electroacoustic music groupie, she has started composing and had her first piece performed in Birmingham(UK) and Winnipeg in autumn 1996.

Christopher K. Koenigsberg
Brains: Audiophile Computer Music

Compact disc, PWOA 011,
PWOA Productions, Suite 705-405,
1163 E. Ogden Avenue,
Naperville, IL 60563 USA

Since his teenage years, Chris Koenigsberg has played in numerous musical styles, including rock, classical, improvised electro-acoustic, fusion, and of course computer music. The ten compositions on his recent CD, *Brains*, display this experience as well as his serious interest in exploring musical possibilities that are unique to the computer. Koenigsberg earned an MFA in Electronic Music and Recording Media at Mills College in 1993, and much of the work on the *Brains* CD is the result of his studies there.

The CD begins with three of its best compositions. The first track is *Back to Nothing*, a piece that utilizes granular synthesis ex-

clusively. Through the piece, textures evolve and combine to form a distinct three part form: the first moves from noise to pitched material, the second progresses from low to high tessitura, and the third which depicts, in Koenigsberg's words, "...a loud cosmic burning object, falling into smoldering ashes."

The second track on the CD is also one of its highlights. Entitled *The Rat's Nest*, the source materials for the piece were created by reading the computer's virtual memory swapfiles as if they were soundfiles. This of course resulted in a set of quite bizarre sounds for Koenigsberg to utilize in his piece. The CD program notes quote one listener, Seth Clark, as saying, "That's the most obnoxious piece of music I've ever heard." Somehow, Koenigsberg has discovered textures that evoke amplified Martian dentists' drills gone amok, or possibly the sounds of stretching, squeezing, and rubbing balloons made of radioactive sandpaper. For someone not in the right mood, this piece could be tortuous; however, I found it exhilarating. I only began to reach a point of sensory overload near the end, when its machinegun-like constancy began to wear me out.

Next, in a wonderful change of pace, Koenigsberg presents *The Free Spirit*, an eighteen minute landscape of slowly evolving sonic texture with segments of speech added. I found this piece to be the perfect antidote for the hyper-energy of *The Rat's Nest*. Koenigsberg states in the CD notes that when composing *The Free Spirit* he "...took on the challenge of producing a lengthy piece that would be consistently rewarding to the patient listener." The result is mostly a success, although at two times in the piece I felt that the pacing was too slow to sustain my interest. This happened several minutes into the piece and again near the end. Could it be that I just don't have enough patience?

A few other noteworthy works on the CD include: *Brains*, the title track, which manipulates a 1975 recording of Koenigsberg's father complaining about the noise Chris was making in their basement; *LCM for 12 Piano Sample*, a piece which algorithmically combines twelve distinct thematic voices in various combinations; and *Artifact #2? "ArtMix"*, another noisy piece that contains interesting combinations of textures and rhythms, including something

Koenigsberg calls "bleating Venusian lambs."

The CD ends with two pieces that show a stronger pop music influence than the others on *Brains*. The first of these two is *Yellow Teeth Dub*, an homage to reggae dub studio masters. This piece features FM synthesis sounds, drum machine patterns, and a short piano riff. Finally, the last track on the CD is *All the Same to Me*, which Koenigsberg describes as "a gentle lunatic's love song, jumbled and filtered through a dubwise mix."

Reviewed by Douglas Geers, Columbia University, USA

Music from the University of Texas Electronic Music Studios—Compositions by Russell Pinkston, Mark Wingate, Mark Schultz, Howard Fredrics, Jody Nagel, and Karl Korte

Compact disc, CRC 2245,
CDCM Series Number 20
Centaur Records, 8867 Highland Rd.,
Suite 2061, Baton Rouge,
Louisiana 70808, USA

This CD, the twentieth in CDCM's continuing series, features six recent compositions by both students and faculty of the Electronic Music Studios at the University of Texas. The works chosen for this CD make an interesting collection, as they all share a common interest in combining traditional musical instruments (including the voice) with computer music sounds.

Don't Look Now, a 1990 composition by Russell Pinkston, creates an energetic and natural integration of string quartet and tape. The London-based Smith Quartet performs on this recording for Pinkston, who is Professor of Composition and Director of the Electronic Music at the U.T. studios. The tape part for *Don't Look Now* consists entirely of processed sounds from string instruments, and part of Pinkston's intent in the piece is to make it unclear at times which sounds are coming from the tape and which are from the performers. Musically, this work is quite rhythmic and uses several concise thematic ideas, creating a clear sense of shape. The musical language shows some debt to Bela Bartok, especially in Pinkston's use of certain string effects such as *col legno battuto* and *snap pizzicato*. However, *Don't Look Now* achieves its own voice by using these effects in unexpected new ways within the work's tape part: Pinkston layers *col legno* and *pizzicato* sounds in many ways, creating gestures, harmonies, and vibrant textures of sound. He combines these materials with the live musicians for effects of both compliment and contrast.

Mark Wingate's *Ode to South-Facing Form* leads the listener through a sensuous investigation of the human voice as an instrument of religious belief or appeals to "higher forces." This composition won the 1992 Stockholm International Electronic Arts Award, and was featured on the compact disc of pieces from the 1995 ICMC. Most of the sounds in the piece are derived from

voices performing religious rituals, using recordings of voices from places such as Tibet, Japan, and Africa. Wingate uses filtering, time stretching, transposition, granularization, and other signal processing methods to produce a sonic experience that is rich and pleasing to both ear and the mind.

Earendil, a 1987 work by U.T. alumnus Mark Schultz, combines lyrical flute playing by Karl Kraber with a tape part that sounds somewhat dated but which is still musically effective. This work was one of the first computer music pieces done at the U.T. studios, and the tape part was synthesized on an IBM 3081 mainframe computer running MUSIC 360. The tape part uses a few sets of timbres, basically divisible into percussive and non-percussive, most of which have a distinct FM synthesis flavor. Nevertheless, Schultz makes the most of his limited palette. The composition clearly centers on the flute, while the tape part provides harmonic support and some percussive interjections. Most importantly, Schultz writes interesting and idiomatic material for the flute. Because of this, the piece as a whole is a success.

Charles Bukowski's poem *The Tragedy of the Leaves* is set as computer music in Howard Fredric's composition of the same name. The text of the poem is spoken in linear order, first in small phrases, then in increasing amounts to the end. The voice speaking the text is processed differently each time it appears, though it is nearly always intelligible. After each appearance

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Reviews, cont.

of the poem's text follows a non-text section, most of which are composed of concrete sounds mixed with processed voice and concrete sounds. Some of the moments between the text are quite engaging, although their connection to the text or its tone is not always clear. Overall the piece feels a bit long, possibly because the structure becomes predictable and the sections of the piece don't seem strongly related to each other.

Jody Nagel's 1990 composition *Gandalf the Grey* combines solo clarinet with computer generated tape to create a shimmering, restless musical experience. Like Mark Schultz's *Earendil* for flute and tape, this work was composed using MUSIC 360 on an IBM 3081 computer. However, musically the two works are quite different. *Gandalf the Grey* gives a more important role to the tape part, including brief sections where the clarinet is not even present. Moreover, this piece generally has more activity and a wider range of timbres in the tape part than Schultz's piece. On the other hand, whereas *Earendil* succeeded because of its interesting and memorable flute part, *Gandalf the Grey*'s clarinet part is not as distinctive. The clarinet plays some thematic motives repeatedly, such as variations on a scalewise ascent to a trill; but these gestures don't project as strong a sense of character as the flute part of Schultz's work.

U.T. Professor of Composition Karl Korte finishes the CD with his edgy composition *Colloquy*, for flautist (playing flute, bass flute, and piccolo) and tape. The tape part of *Colloquy* was composed by manipulating flute samples on a Fairlight Computer Music Instrument. During the piece, the flautist moves from bass flute to flute to piccolo and then back to flute again, giving a kind of sonic trajectory to the music's tessitura. Another interesting device Korte employs is a brief, highly rhythmic motive that appears in the tape part at the opening

of *Colloquy*. This motive recurs and changes during the piece, usually at odds with the live flute part, creating an interesting musical tension. Near the end of the work, the flute and tape play this material in rhythmic unison but immediately separate again as the piece slowly winds towards its conclusion.

Reviewed by Douglas Geers, Columbia University, USA

Joel Chadabe

After Some Songs

Joel Chadabe, electronics
Jan Williams, percussion
with Bruno Spoerri, saxophone
and Reto Weber, udu & djembe

Total Time: 56:28
Deep Listening DL 1 1995 CD

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Joel Chadabe is well known as a pioneer in the development of interactive computer music systems and also as a composer and performer of electronic improvisations utilising those systems. On *After Some Songs*, he performs a number of short improvisational pieces using Intelligent Music's interactive performing program, M, running on an Apple Mac controlling a Yamaha TX-816 synthesiser. Chadabe is joined by percussionist Jan Williams for most of the disc, with additional instrumentalists on a couple of tracks. The live instrumentalists weave their own improvised lines through the computer-generated music, the compositional parameters of which are modified by Chadabe during the perfor-

mance, in response to the live playing. Chadabe further integrates the computer and live improvisations by using synthesiser voices which closely resemble their live counterpart, so that it is impossible to discern the true source of much of the music. The CD's title refers to the fact that several of the pieces use abstractions of jazz classics, such as *My Funny Valentine*, *In a Sentimental Mood* and *Stella by Starlight*, as the basis for the intelligent music processes carried out by the software during the performance. While the sources of these abstractions are rarely recognisable (to my ears, at least) they do imbue the works with an appropriately jazzy character, providing, as Chadabe puts it, "a lyrical surface to an underlying complexity".

The eight works on the disc provide a pleasant and interesting musical programme, encompassing a variety of moods and with a sufficient mix of instrumentation for the listener to take the whole disc at one sitting. Indeed, it is probably best to experience the disc this way, rather than doling it out piecemeal, as one might with somewhat heavier music. The tracks have been carefully selected and ordered on the disc so as to present a balanced overall programme and I certainly found that I derived greater enjoyment from sustained immersion in the music than from an occasional dipping.

My only reservation about this disc concerns the merits of recording improvised music generally. I can't help feeling that much of the excitement of such works is lost by committing them to a permanent and immutable medium. I don't doubt that anyone coming away from a Chadabe/Williams concert would love this CD as a souvenir of the event. Coming to it cold, however, I was left with the distinct feeling that something was missing. Without the added frisson of the live performance, there is a danger of these works being regarded as trivial or trite—which would be a shame, particularly as the playing and production are flawless.

reviewed by Steve Benner

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REVIEW OF LARRY AUSTIN 66TH BIRTHDAY CONCERT

Louis Ferdinand

[editor's note: a formatting gremlin in the last issue of *Array* resulted in an unfortunate cut to this review. With apologies to both author and composer, we are republishing it in full]

Our colleague and a "senior" member of the ICMA, Larry Austin, was "composer for a night" in a gala celebration entitled "Interpretations: Larry Austin's 66th Birthday Concert" which was held at Merkin Hall in New York City on September 12, 1996. An impressive list of contemporary music virtuosi was on hand to perform Austin's music and a large, appreciative audience attended.

Austin is one of the rare composers of his generation who is active in a wide variety of media, including, solo tape music, tape and performers, and instrumental music. The evening began with a solo tape gallery concert of three tape pieces composed by Austin during the first six years of this decade. The first piece, *SoundPoemSet* from 1990-91, is in four movements, each based on recorded conversations Austin had with four contemporary composers. The first movement, *SoundPoem: Pauline Oliveros*, was characterized by deep, low, very resonant and very slow vocoder manipulation of the recorded text. One senses that Austin has managed to capture something of Oliveros' personality in this soundpoem. The second movement, *SoundPoem: Jerry Hunt* had a certain lightness, quickness, and mechanistic, yet ritualistic quality which, for anyone who knew Jerry Hunt and his music, is an apt description of him. *SoundPoem: Morton Subotnick* utilized glissing vocoder sounds and contained a sort of bubbly rhythmic section. This soundpoem is much more varied than the first two, more ambitious, with greater attention to detail. The last movement "*SoundPoem: David Tudor*" is in great contrast to the previous one: much less varied colors, more noise, with a similarity to the first movement, this last section rounds out these unique musical portraits of four "musical adventurers".

The second tape piece, *Rompido!* (1993), is in three movements and makes use of a very minimal world consisting of sounds pro-

duced by hitting, tearing, and sculpting granite. The first movement introduces a kind of virtual "stone marimba" orchestra playing glissandi and very fast passages. The transpositions of the sounds give them a kind of metallic-plus-stone hybrid sound quality. The movement ends with a very fast windchime-like sped-up version of the marimba which made me think of musique concrete techniques. While retaining some of the previous section's "stone marimba" quality, the second movement seems to come out of the pages of the Futurist Manifesto. It is full of hammers, drills, and mechanical sounds related to various sculpting techniques. The resulting sound has a very statistical quality to it: constantly busy, but without any clear repetitive shapes. It ends with a transition which moves completely out of the statistical soundscape and towards long sounds and finalizes on water sounds (still part of the sound world of sculpting granite!). The third movement begins with sounds which seem to come out of an analog studio: sweeping band-pass filters transform the stone marimba as it becomes more lyrical, vocal, and less percussive. It wasn't until this movement that it occurred to me that this piece is really about microtonality in some sense. The movement is more layered, with a variety of gestures and sounds which makes it the most ambitious of the three movements. Austin has managed to create a rich and varied piece out of a very limited sound world by working with the recorded materials in such an intimate fashion that the sounds lose their non-musical objective relationship to the world outside of this piece.

The last tape piece, entitled *Shin-Edo: CityscapeSet* (1994-96) is quite different from the previous two pieces. It is more of a true environmental "soundscape" in the sense that Austin uses concrete sounds while retaining their non-musical, objective meanings/identities. In other words, most of the sounds are not transformed to the degree where they become abstract, unrecognizable, or "something else". In a sense, the piece is more of a carefully constructed collage, and has much more of a "post-modern" feel to it than the previous two pieces. (Of course, some of Shaeffer's early concrete pieces also sound amazing fresh today as well.) In the first movement one hears sirens, announcements by street vendors, pachinko parlors, popular Japanese music playing in the background, and

Austin saying good morning in Japanese as he leaves his apartment in Tokyo to take off for Kunitachi College of Music to work on this very piece during a stay in Japan in 1994. If the first movement personifies the city, the second is pure country-side: rain, ducks, insects and a simplicity which contrasts with the dense and busy first movement. The third movement contains sounds of children playing in a schoolyard behind Austin's apartment, dogs barking, trucks going by, train crossing signals. The fourth and fifth movements contain sounds of train travel in Japan, conductor announcements, and again the ubiquitous train crossing signal which one hears everywhere in Japan (and even for a foreigner who has lived in Japan just a short time, evokes a nostalgic feeling similar to that of my native train whistle!). The piece ends with what, I think, must be the carillon sounds of the mechanical clock at Shinjuku Station. The western carillon sound is the only thing in the piece which does not sound Japanese at all, and is fitting as an end to both the piece and a westerner's journey in Japan. I went away from this concert feeling that, for Austin, the tape medium is a deeply personal and serious mode of expression. It was clear that Austin has a respect for and mastery of the medium which is rare today.

The second half of the evening consisted of four pieces for performers and tape. Again, like the tape pieces, these compositions were composed during the last six years. Joan LaBarbara performed *La Barbara: The Name/The Sounds/The Music* (1990) for soprano and computer music on tape. The piece makes use of extended vocal techniques both on the tape and performed live. The marriage of performer and tape is impressive, while a kind of counterpoint kept the two from merging to excess. In the second section the tape part serves as a kind of statistical background for the vocalist, and in the third section this relationship is reversed. (I found the actual conversations of Joan LaBarbara speaking on the tape to be disturbing. They seemed like interruptions in an otherwise cohesive duet.) The synchronization at times is very striking—almost giving the impression that the vocalist is amplitude-gating the electronic part, and the formal structure of the piece is quite intricate. Ms. LaBarbara seemed completely at ease with the tape part and was able to interact very musically with it, almost as if it were a second musician, or another version of her own persona.

The second piece on the program was *AccidentsTwo* (1992), for amplified/processed piano and computer music on tape. This was performed by Philip Mead and Steven Montague. Mr. Mead is a wonder to watch perform. His actions are as economical and controlled as a cat pouncing on prey. In fact, I was briefly reminded of the Henry Cowell piece "Tiger", which makes great use of piano clusters. A brief, simplistic description of the piece is in order: Mead awaits slide projections which appear at unexpected times and in an unexpected order, while he is expected to interpret them immediately as the score for the piano part. The piece has a kind of orgiastic power rarely found in concert music. For most of the piece, being able to follow the score was fascinating, but later in the piece the results were sometimes too predictable because the audience could see the score. The continuous trill-like background to the piano part gave the piece a kind of urgency that was underscored by the raw and brusquely spatialized electronic part. And the use of the piano as a truly percussive instrument was quite convincing.

BluesAx (1995-96) for saxophone and tape was performed by Stephen Duke. The tape part begins and ends with ambient sounds, but the bulk of the tape uses material similar to the performance material played by Mr.

Duke. In fact, in some places the synchronicity and similarity of materials gives the impression that the sax is being processed in real-time. The piece includes sections which are interpretive portraits of four great jazz saxophonists. The early jazz section, a portrait of Sidney Bechet, is a wild, raucous and joyous movement. Coltrane, Hodges, and Charlie Parker portraits follow. Yet, like in the composer portraits in *SoundPoemSet*, Austin compositionally controls the material in such a way that there is no doubt we are listening to Austin's portraits of these musicians, and not just a simple imitation of their music and styles. Duke gave a superb, controlled performance. He seemed completely at ease with the extremely difficult music, and at the same time "at one" with the tape part.

Life Pulse Prelude (1996) for live and recorded percussionists was performed by the Percussion Group Cincinnati. This piece shows another side to Austin's music. The first three pieces had a certain level of intuitive, almost physical, contact between performers and tape. And the music itself had a kind of visceral Dionysian quality. Here we enter a much more formalistic world. This is controlled and Apollonian. *Life Pulse Prelude* continues Austin's exploration of the rich lode of material left by Charles Ives for his unfinished *Universe Symphony*. Each of the three percussionists plays at a different tempo. The orchestration and scoring is quite carefully done to avoid any sense of a mass result. One hears the three players clearly as distinct, sepa-

rate lines. There is nothing statistical sounding here. The unexpected mezzo-piano to mezzo-forte dynamic range of this piece is in great contrast to the extreme dynamics found in the other pieces. (Especially considering that one usually associates percussion music with extreme dynamics.) Formally the piece is simpler than the previous three pieces. Basically, it moves from delicate and thoughtful to powerful, and then returns briefly to delicate. As the amplitude/intensity increases, so does the feeling that the music becomes more statistical, less organized. But Austin did a terrific job at keeping me guessing. I imagined that the piece would end by calling on all the forces of the three percussionists and the percussion on tape, but he brings the piece back down immediately after it peaks. The musicians showed great concentration and dynamic control in what appeared to be an extremely difficult piece.

It is obvious that at 66 years old, Austin's compositional output has not slowed. Just taking stock of Austin's works in the last 6 years is a formidable task. One comes away convinced that Austin is a composer with a completely individual voice, a voice that cannot easily be put in any category. His energy and explorative, experimental attitude puts most 40-year-olds to shame. But a concert like this is valuable inspiration for any composer who has sat in front of an empty page wondering if he still has any more ideas left...The Electronic Music Foundation (EMF), directed by Joel Chadabe, held a champagne and birthday cake reception after the concert.

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Members' News

BRIAN BELET's composition [*BASS*]ically Harmless, for electric bass and computer, was performed at the SCI-Region VII 1996 Annual Conference, Arizona State University, Tempe, AZ, 26 October 1996. [*MUTE*]ation, for computer-generated tape, and *Quanta Affected by Observation*, for electronic tape, were performed at the NOVUM - Festival der aussergewohnlichen Musik, Dresden, Germany, 27 October 1996. *Computer Etudes*, for computer, was premiered at the American Music Week / Electro-Acoustic Con-

cert, San Jose State University, San Jose, CA, 7 November 1996.

TERRE THAEMLITZ's latest albums, *Die Roboter Rubato* and *Couture Cosmetique*, will be released on Mille Plateaux in January and March of 1997 respectively. *Die Roboter Rubato* consists of improvisational piano renditions of Kraftwerk songs, their High Modernist sound serving as a metaphor for the spiral of Kraftwerk's critique of technology into self-referentiality. *Couture Cosmetique* is CPU generated Con-

temporary Ambient which draws comparissons between Ambient composition techniques and anti-essentialist transgenderism in their simultaneous subversion and perpetuation of cultural signifiers. HTML versions of accompanying texts are available at <http://www.caipirinha.com/comatonse/listening/material.html>



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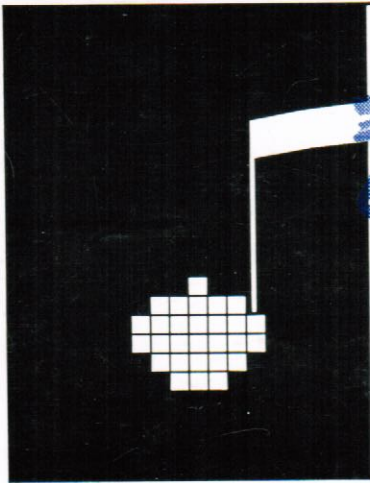
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