Deutsche Gesellschaft für Elektroakustische Musik

Mitteilungen

44

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Ein entsprechender Vordruck findet sich am Ende dieser Ausgabe.

N A C H R I C H T E N

Rostrum 2002

Das International Music Council (IMC), Abteilung der UNESCO und mit Sitz in Paris, veranstaltet alle 2 Jahre unter dem Titel „International Rostrum of Electroacoustic Music (IREM)“ einen internationalen Wettbewerb für elektroakustische Musik. Teilnehmer sind nationale Radiostationen, die einen Delegierten stellen sowie die Auswahl der eingereichten Titel aus ihrem jeweiligen Land vornehmen.

Seit ein paar Jahren können auch Nicht-Radiostationen am IREM teilnehmen. In diesem Jahr waren es sechs nationale Organisationen für elektroakustische Musik. So vertrat die Deutsche Gesellschaft für elektroakustische Musik (DEGEM) in diesem Jahr mit einem Delegierten Deutschland. Eingereicht wurde je ein Titel von Werner Cee (DRIFT, Part One) und Tilman Küntzel (FILIGRAN TRANSFORMATION II).

Das Rostrum wurde gegründet um elektroakustische Musik zu fördern und den Austausch von Produktionen im internationalen Maßstab zwischen den Radiostationen zu erleichtern. Die ausgewählten Titel des letzten Rostrum in Madrid im Jahr 2000 wurden weltweit fast 150 mal gesendet.

Das 9. IREM 2002 war Gast des dänischen Rundfunks und fand anläßlich des Musikbro (Music Bridge) des Danish Institute of Electroacoustic Music (DIEM) in Kopenhagen sowie des Elektrisk Helg (Electronic Weekend) Festivals des Schwedischen Rundfunks in Malmö statt. Vertreten waren 17 internationale Radiostationen sowie die sechs nationalen Organisationen, die zusammen 57 Titel eingereicht hatten.

Alle eingereichten Titel können für ein Jahr lizenzfrei gesendet und/oder in Konzerten präsentiert werden. Als besondere Empfehlung zur Präsentation ausgewählt wurde nach dreitägigem Hörmarathon das Stück „Studie 2“ von Emanuele Casale (Italien), das Stück „... the fetters of a dream“ von Natasha Barrett (Norwegen) sowie weitere Werke aus Italien, Argentinien und Dänemark. In der Rubrik für KomponistInnen unter 30 Jahren wurde erstmals dieselbe italienische Komposition „Studie 2“ ausgewählt.

Alle 57 eingereichten Titel können unter
www.dr.dk/irem

als RealAudio-Files angehört werden.

Weitere Infos:

IMC:
www.unesco.org/imc/homecontent.html

Michael Harenberg

Wer die **DEGEM-Mailingliste** für Konzertankündigungen etc. nutzen möchte, schicke die entsprechenden Informationen bitte an
degemnews@yahoogroups.com

Diese Liste wird moderiert, d.h. alle an diese Adresse gesendeten Mails werden nicht sofort verbreitet, sondern gelangen erst zu den Moderatoren (zur Zeit Manfred Fox und Andre Bartetzki), von denen sie dann freigegeben werden können.

Andre Bartetzki

Beim 29. Concours International de Musique et d'Art Sonore Electroacoustiques de Bourges 2002 erhielt **Frank Niehusmann** für „Untertagemusik Nr. 1" eine Mention in der 3. Kategorie „œuvre d'art sonore électroacoustique". **Sun-Young Pahg** wurde mit „Relief Oktett" Finalistin in der Sektion 1 - Residence.
www.imeb.asso.fr/
english/2002/concours/palmres2002.html

Hiromi Ishii erhielt mit dem „ORS Award" ein Stipendium 2002-2003 für England.

Im Rahmen der Marler Medienkunst-Preise wurde im Jahr 2002 erstmalig der Deutsche Klangkunst-Preise vergeben. Aus den eingereichten Bewerbungen wurden die Künstler Werner Cee, Rilo Chmielorz, Roswitha von den Driesch und Jens-Uwe Dyffort, Helmut Lemke, Andreas Oldörp, Ed Osborn, Martin Riches und Johannes S. Sistermanns ausgewählt, um ein ortspezifisches Klangkonzept zu entwerfen. Aus diesen 10 Konzepten wurden **Georg Klein**, **Tilman Küntzel** und Alexander Rüdiger Titz als Preisträger ermittelt, deren Arbeiten realisiert wurden.

B Ü C H E R

In den Mitteilungen 43 erschien ein Artikel von Antje Grajetzky zum Thema „Der Tonmeister als Interpret" als Auszug aus ihrer Magisterarbeit, die bei PFAU erscheinen wird. In der Einleitung fehlten leider die Angaben über diese Publikation. Das soll hier nachgeholt werden:

Komponisten und Ingenieure

Antje Grajetzky
ISBN 3-89727-214-8, PFAU-Verlag 2002
100 Seiten

Sound und Lautsprechermusik
Ein Beitrag zu den unterrichtlichen Möglichkeiten musikalischen Hörens.

Harald Schwarz
ISBN 3-89727-201-6, PFAU-Verlag 2002
218 Seiten

Musik im Kopf - Hören, Musizieren, Verstehen und Erleben im neuronalen Netzwerk

Manfred Spitzer
ISBN 3-7945-2174-9, Schattauer 2001
ca. 470 Seiten

The Virtual Score
Representation, Retrieval, Restoration

Edited by Walter B. Hewlett and Eleanor Selfridge-Field
ISBN 0-262-58209-0, MIT-Press 2001
291 Seiten

The Virtual Score examines a broad range of approaches to working with musical scores in ways suited to electronic distribution. The first section, on musical representation and interchange, discusses early music and its multiple editorial stances, scores in Braille musical notation (with and without NIFF), the GUIDO format for "adequate" (as opposed to comprehensive) music representation, Extensible Markup Language (XML) and music, and the latest methods for distributing scores online. The second section discusses retrieval and/or analysis of data from encoded melodies. The final section discusses the use of image-processing software to restore lost features of primary sources of music prints and manuscripts, to archive the original and/or restored images, and, in some cases, to facilitate electronic access to the images.

Karlheinz Stockhausen bei den Internationalen Ferienkursen für Neue Musik in Darmstadt 1951-1996 - Dokumente und Briefe

ISBN 3-00-007290-X, Stockhausen Verlag 2003
646 Seiten

www.stockhausen.org

Surround
Einführung in die Mehrkanaltechnik

Christian Birkner
ISBN 3-932275-39-X, PPV Medien
192 Seiten

The Cognition of Basic Musical Structures

David Temperley
ISBN 0-262-20134-8, MIT-Press 2002
360 Seiten

Sounds Heard
A potpourri of Environmental Projects and Documentation, Projects with Children, Simple Musical Instruments, Sound Installations, Verbal Scores, and Historical Perspectives.

Hugh Davies
ISBN 1-902440-05-6, Chelmsford 2002
122 Seiten + CD

Electronic and Experimental Music: Pioneers in Technology and Composition

Thomas B. Holmes
ISBN 0415936446, Routledge 2002
336 Seiten

Thom Holmes' book on electronic music begins by discussing electronic music technology and continues by discussing musical precedents, pioneers in instrument invention (among them Thaddeus Cahill, Leon Theremin, Maurice Martenot, Friedrich Trautwein, Laurens Hammond), musique concrète, pioneers in tape music (John Cage, Edgard Varèse, Karlheinz Stockhausen), the inventions of the 1950s (Raymond Scott, Hugh le Caine), the birth of the commercial synthesizer (Robert Moog, Wendy Carlos, Donald Buchla), innovators (Robert Ashley, Gordon Mumma), the origins of computer music, and aproaches to composing. The book includes many discussions of work by a wide range of particular composers including Milton Babbitt, Louis and Bebe Barron, David Behrman, John Bischoff, Pierre Boulez, Joel Chadabe, Herbert Deutsch, Pierre Henry, Lejaren Hiller, Ron Kuivila, Alvin Lucier, Annea Lockwood, Otto Luening, Paul Miller (aka DJ Spooky), Thurston Moore (& Sonic Youth), Ikue Mori, Pauline Oliveros, Laurie Spiegel, Iannis Xenakis, and many many others.

Fümms bö wö tää zää Uu
Stimmen und Klänge der Lautpoesie

Christian Scholz, Urs Engeler
ISBN 3-952125881, Gva & Frieden 2002
448 Seiten, mit Audio-CD

Lautgedichte von Velimir Chlebnikow, Hugo Ball und Kurt Schwitters bis zu Ernst Jandl, Gerhard Rühm, Carlfriedrich Claus und 100 weiteren Künstlern. Kinderverse, Geheimsprachen, Zaubersprüche, Glossolalien und Tiersprachen sind ebenso berücksichtigt wie Beispiele zum Sprachlaut in der Musik und in der bildenden Kunst. Auf der CD: Jaap Blonk, Brenda Hutchinson, Fatima Miranda, Phil Minton, David Moss und 12 weitere Künstler.

Biblio-, Disco- und Filmographie zur Lautpoesie:
www.engeler.de/scholz.html

Sound Sculpture
Intersections in Sound and Sculpture in Australian Artworks

Ros Bandt
ISBN: 1877004022, Craftsman House 2002
160 Seiten incl. Audio-CD

This book is an overview of Australian sound sculpture, which the author defines as „works either created in Australia or by an Australian artist". The many photographs and diagrams throughout the book, and the sound examples on an attached CD, vividly convey the work of a wide range of artists. But the book goes beyond Australia. It is really about the concepts behind 'sound sculpture', by which Bandt means site specific sound. It is about the three-way relationship between the nature of a location that exists in space, the nature of sound that exists in time, and the way that humans experience it.

Virtual Art
From Illusion to Immersion

Oliver Grau
ISBN 0-262-07241-6, MIT-Press 2003
360 Seiten

Although many people view virtual reality as a totally new phenomenon, it has its foundations in an unrecognized history of immersive images. Indeed, the search for illusionary visual space can be traced back to antiquity. In this book Oliver Grau shows how virtual art fits into the art history of illusion and immersion. He describes the metamorphosis of the concepts of art and the image and relates those concepts to interactive art, interface design, agents, telepresence, and image evolution. Grau retells art history as media history, helping us to understand the phenomenon of virtual reality beyond the hype.

Microsound

Curtis Roads
ISBN 0-262-18215-7, MIT-Press 2002
392 Seiten incl. Audio-CD

Composers have used theories of microsound in computer music since the 1950s. Distinguished practitioners include Karlheinz Stockhausen and Iannis Xenakis. Today, with the increased interest in computer and electronic music, many young composers and software synthesis developers are exploring its advantages. Covering all aspects of composition with sound particles, Microsound offers composition theory, historical accounts, technical overviews, acoustical experiments, descriptions of musical works, and aesthetic reflections.

The Book of Music and Nature

ISBN 0-819564087, Wesleyan University Press 2001
272 Seiten incl. Audio-CD

This innovative book and CD brings together a fabulous array of authors, composers, and thinkers who explore the world of sounds of nature in their work. The essays celebrate our relationship with natural soundscapes. They also pose stimulating questions about that very relationship. The anthology includes texts by John Cage, Hazrat Inrayat Khan, Pierre Schaeffer, Rainer Maria Rilke, Toru Takemitsu, Pauline Oliveros, Hildegard Westerkamp. Interspersed throughout are brief excerpts of works of fiction. This book was created by David Rothenberg and Marta Ulvaeus, editors of Terra Nova, a literary and artistic periodical.

Theremin: Ether Music and Espionage

Albert Glinsky
ISBN 0252025822, University of Illinois Press 2000
464 Seiten

Albert Glinsky's book portrays Leon Theremin as one of the most colorful personalities in the history of electronic music. As the inventor in 1920 of a new musical instrument that even today remains magical and popular, Theremin demonstrated his instrument for Lenin, then toured Europe and became the toast of the town in New York City from 1927 to 1938. As an agent of Soviet espionage, he passed data on US industrial technology to the Soviet government and returned to Moscow in 1938, then disappeared into the world of Soviet technology. As a scientist in the employ of the Soviet government, he later developed a bugging device for which he won the Stalin prize of 100,000 rubles. In 1991, he returned briefly to the United States to meet again with old friends. Theremin died in 1993. Glinsky's book, with exceptional documentation and a human as well as historical perspective, brings this story to life.

Readings In Music And Artificial Intelligence

Eduardo Reck Miranda (Hrsg.)
Harwood Academic Publishers

A compilation of essays and articles that deals with the question of how human beings acquire, store, access, and apply knowledge to create music. The essays are by Robert Rowe, Antonio Camurri, Roger Dannenberg, Gerhard Widmer, Francois Pachet ... and many other musicians, theorists and researchers who are concerned with artificial intelligence in music.

The Soundscape Of Modernity
Architectural Acoustics and the Culture of Listening in America, 1900-1933

Emily Thompson
ISBN 0262201380, MIT Press 2002
450 Seiten

The book charts dramatic transformations in what people heard and how they listened during the first part of the 20th century. What they heard was the new sound of modern technology and they listened to it as newly critical consumers. By examining the technologies that produced this sound, Thompson provides insights into the acoustical environment of the modern world.

Ars Electronica: Facing the Future
A Survey of Two Decades

Edited by Timothy Druckrey
ISBN 0-262-54127-0, MIT-Press
449 Seiten

Algorithmic Composer

David Cope
ISBN 0895794543, A-R Editions 2000

This is the third and final book in a trilogy by David Cope on applying principles of artificial intelligence to computer-based musical analysis and composition. In this book, Cope examines the musical application of Markov chains, randomness and association nets, and discusses the role of inference in the derivation of rules with regard to tonality, non-pitch elements, variation, and texture. In addition, he discusses musical structures in terms of signatures and pattern-matching and the role of hierarchical patterns in composition. The book includes many notated musical examples. It also includes a CD-ROM that contains ALICE (ALgorithmically Integrated Composing Environment), a subset of his earlier EMI (Experiments in Musical Intelligence) software.

Uma Poetica musical brasileira e revolucionaria

Jorge Antunes
ISBN 85-85255-02-1, Sistrum Edicoes Musicais 2002
366 Seiten

Anläßlich des 60. Geburtstages von Jorge Antunes, Prof. für Elektroakustische Musik an der Universität von Brasilia, ist das Buch „Uma Poetica musical brasileira e revolucionaria" erschienen, das einen Überblick über Antunes' umfangreiches Werk und die Entwicklung der EM in Brasilien vermittelt. Mit vielen Fotos, Dokumenten und Partiturauszügen, in portugiesischer Sprache.

Essentials Of Music Technology

Mark Ballora
ISBN 0130937479, Prentice Hall 2002
240 Seiten

This book is aimed at students of musictechnology, whether they are prospective composers of electronic music, recording engneers, or sound designers, and it is such an excellent and efficient introduction to the technology of electronics and music that it should be required reading for every student in the field. The subjects are basic acoustics and perception, recording, computers and the internet, relevant number systems, MIDI, and digital audio.

The Topos of Music
Geometric Logic of Concepts, Theory, and Performance

Guerino Mazzola, with Stefan Göller and Stefan Müller
ISBN 3-7643-5731-2, Birkhäuser 2002
1368 Seiten incl. CD-ROM

The Topos of Music is the upgraded and vastly deepened English extension of the seminal German Geometrie der Töne. It reflects the dramatic progress of mathematical music theory and its operationalization by information technology since the publication of Geometrie der Töne in 1990. The conceptual basis has been vastly generalized to topos-theoretic foundations, including a corresponding thoroughly geometric musical logic. The theoretical models and results now include topologies for rhythm, melody, and harmony, as well as a classification theory of musical objects that comprises the topos-theoretic concept framework. Classification also implies techniques of algebraic moduli theory. The classical models of modulation and counterpoint have been extended to exotic scales and counterpoint interval dichotomies.
www.birkhauser.ch

Real Sound Synthesis for Interactive Applications

Perry R. Cook
ISBN: 1-56881-168-3, AK Peters Ltd. 2002
250 Seiten mit CD-ROM

The book emphasizes physical modeling of sound and focuses on real-world interactive sound effects. It is intended for game developers, graphics programmers, developers of virtual reality systems and training simulators, and others who want to learn about computational sound. It is written at an introductory level with mathematical foundations provided in appendices. An enclosed CD contains code examples and sound files.

www.cs.princeton.edu/~prc/AKPetersBook.htm

Computer Sound Design: Synthesis Techniques and Programming

Eduardo Reck Miranda
ISBN 0240516931, Elsevier/Focal Press 2002
263 Seiten + CD-ROM

Foreword by Jean-Claude Risset; Preface; Computer sound synthesis fundamentals; Loose modelling approaches: from modulation and waveshaping to Walsh and wavetable; Spectrum modelling approaches: from additive to analysis-resynthesis and formant; Source modelling approaches: from subtractive and waveguides to physical and modal; Time-based approaches: from granular and pulsar to PSOLA and statistical; Practical case studies and sound design secrets: from humanoid singing to Klingon phasers; Artificial intelligence, supercomputing and evolutionary computation: towards the cutting edge; Introduction to the software on the accompanying CD–ROM; Appendix 1: Mathematical specifications; Appendix 2: Formant values; Appendix 3: Artist's Inductive Machine Learning Algorithm; References; CD-ROM instructions

ON/OFF - Eetteriaanista sahkomusiikkiin (From Ether Sounds to Electronic Music)

Petri Kuljuntausta
ISBN 951-578-934-6, LIKE Publishing Ltd & KIASMA Museum of Contemporary Art 2002
800 Seiten incl. Audio-CD, in finnischer Sprache

www.kiasma.fi/on-off

Z E I T S C H R I F T E N

Tonmeisterinformationen 1/2003

www.tonmeister.de

Thema: Theaterton

u.a. Bericht von Norbert Ommer über seine Arbeit an Steve Reichs „Three Tales"

Neue Zeitschrift für Musik 1/03 „Klangkunst"

www.schott-online.com

- Sabine Sanio „Klangkunst – eine reflexive Entdeckungsbewegung"
- 9 Klangkünstler: Robert Jacobsen | Jens-Uwe Dyffort, Roswitha von den Driesch | Frauke Eckhardt | Georg Klein | Tilman Küntzel | Erwin Stache | Hannah Leonie Prinzler | Alexander Rüdiger Titz
- Helga de la Motte-Haber „… ein Feld, das es zu erobern gilt …"
- Wulf Herzogenrath „Wohin gehört Klangkunst?"
- 6 Orte für Klangkunst: Berlin | Köln | Heidelberg | Freiburg | Vlotho | Saarbrücken
- Julia Gerlach „Handlungsspielräume. Der aktive Hörer in Klangkunst und Internet"
- Klangkunst in den Festivals neuer Musik? – Armin Köhler, SWR | Bernd Leukert, HR | Matthias Osterwold, MaerzMusik
- Christoph Metzger „Referenzen der Klangkunst"

Leonardo Music Journal (Vol 12) 2003

www.swets.nl/jnmr/jnmr.html

- Nicolas Collins „Thoughtful Pleasures"
- Ben Neill Pleasure Beats „Rhythm and the Aesthetics of Current Electronic Music"
- David Byrne „Machines of Joy: I Have Seen the Future and It Is Squiggly"
- Bob Ostertag „Human Bodies, Computer Music"
- Arthur Elsenaar and Remko Scha „Electric Body Manipulation as Performance Art: A Historical Perspective"
- Reinhold Friedl „Some Sadomasochistic Aspects of Musical Pleasure"
- Ricardo Arias „I Know It's Only Noise but I Like It: Scattered Notes on the Pleasures of Experimental Improvised"
- Leonardo Peusner „Topological Representation of Melody Scores"
- Frieder Butzmann „That's Comish Music! Mutant Sounds"
- Gil Weinberg „Playpens, Fireflies and Squeezables: New Musical Instruments for Bridging the Thoughtful and the Joyful"
- Dave Soldier „Eine Kleine Naughtmusik: How Nefarious Nonartists Cleverly Imitate Music"
- Marina Rosenfeld „The Sheer Frost Orchestra: A Nail Polish Bottle, A Guitar String and the Birth of an Orchestra"
- Robert Wilsmore „Techno, Trance and the Modern Chamber Choir: Intellectual Game or Music to Groove To?"
- Bruce Crossman „Sounding the Ritual of Sensual Rebellion: Pacific-European Resonances"
- Amnon Wolman „The Red Bus Stops Here"
- Yale Evelev „A Nonmusician's Life in Music"
- Robert Poss „The Psychoacoustics of Mono"
- David Rosenboom „Pleasure Has an Opposite, or Somewhere over Whose Rainbow?"
- Christian Scheib „From Gdansk till Dawn"

Organised Sound (Vol 7/1) 4/2002

uk.cambridge.org/journals/oso/

- Andra McCartney „Circumscribed journeys through soundscape composition"
- Barry Truax „Genres and techniques of soundscape composition as developed at Simon Fraser University"
- Gabriele Proy „Sound and sign"
- John Levack Drever „Soundscape composition: the convergence of ethnography and acousmatic music"
- Thomas A. Regelski „Sound compositions for expanding musicianship education"
- David Kolber „Hildegard Westerkamp's Kits Beach Soundwalk: shifting perspectives in real world music"
- Andra McCartney „Alien intimacies: hearing science fiction narratives in Hildegard Westerkamp's Cricket Voice"
- Hildegard Westerkamp „Linking soundscape composition and acoustic ecology"
- David Hahn „Creating the soundscape for Zagreb Everywhere"
- Reynold Weidenaar „Composing with the Soundscape of Jones Street"
- Hans U. Werner „MetaSon #5 Skruv Stockholm: turning schizophonic sound into audiovirtual image"

Organised Sound (Vol 7/2) 8/2002

- Camille Goudeseune „Interpolated mappings for musical instruments"
- Andy Hunt, Marcelo M. Wanderley „Mapping performer parameters to synthesis engines"
- Sidney Fels, Ashley Gadd, Axel Mulder „Mapping transparency through metaphor: towards more expressive musical instruments"

- D. Arfib, J. M. Couturier, L. Kessous, V. Verfaille „Strategies of mapping between gesture data and synthesis model parameters using perceptual spaces“
- Paul Doornbusch „Composers' views on mapping in algorithmic composition“
- Tony Myatt „Strategies for interaction in construction 3“
- Daniel J. Levitin, Stephen McAdams, Robert L. Adams „Control parameters for musical instruments: a foundation for new mappings of gesture to sound“
- Kia Ng „Sensing and mapping for interactive performance“
- Matthew Burtner „The Metasaxophone: concept, implementation, and mapping strategies for a new computer music instrument“
- Charles Nichols „The vBow: a virtual violin bow controller for mapping gesture to synthesis with haptic feedback“

Journal of New Music Research (Vol 30) 4/01

`www.swets.nl/jnmr/jnmr.html`

Special Issue: "Preserving Electroacoustic Music"

- Hugh Davies „The Preservation of Electronic Musical Instruments“
- Joel Chadabe „Preserving Performances of Electronic Music“
- Angelo Orcalli „On the Methodologies of Audio Restoration“
- Simon J. Godsill, Patrick J. Wolfe and William N.W. Fong „Statistical Model-Based Approaches to Audio Restoration and Analysis“
- Andrzej Czyzewski „Applications of Neural Networks and Perceptual Masking to Audio Restoration“
- Andrea Bari, Sergio Canazza, Giovanni De Poli, Gian Antonio Mian „Toward a Methodology for the Restoration of Electroacoustic Music“
- Sergio Canazza and Angelo Orcalli „Preserving Musical Cultural Heritage at MIRAGE“
- Johannes Goebel „The International Digital Electroacoustic Music Archive“
- Goffredo Haus and Maria Luisa Pelegrin Pajuelo „Music Processing Technologies for Rescuing Music Archives at Teatro alla Scala and Bolshoi Theatre“
- Marc Leman, Jelle Dierickx and Gaëtan Martens „The IPEM-archive Conservation and Digitalization Project“
- Maddalena Novati „The Archive of the "Studio di Fonologia di Milano della Rai"“
- Daniel Teruggi „Preserving and Diffusing“
- Laura Zattra, Giovanni De Poli and Alvise Vidolin „Yesterday Sounds Tomorrow. Preservation at CSC“

Journal of New Music Research (Vol 31) 3/02

- Sergi Jordà „Improvising With Computers: A Personal Survey (1989-2001)“
- Teresa Marrin Nakra „Synthesizing Expressive Music Through the Language of Conducting“
- Rens Bod „Memory-Based Models of Melodic Analysis: Challenging the Gestalt Principles“
- Gerhard Widmer „Machine Discoveries: A Few Simple, Robust Local Expression Principles“
- Julyan H. E. Cartwright, Diego L. González, Oreste Piro and Domenico Stanzial „Aesthetics, Dynamics, and Musical Scales: A Golden Connection“
- Christopher Burns „Realizing Lucier and Stockhausen: Case Studies in the Performance Practice of Electroacoustic Music“

Journal of New Music Research (Vol 31) 6/02

Special Issue: "Musical Implications of Digital Audio Effects"

- Nicola Bernardini and Jøran Rudi „Compositional Use of Digital Audio Effects“
- Jean-Claude Risset „Examples of the Musical Use of Digital Audio Effects“
- Yann Geslin „Digital Sound and Music Transformation Environments: A Twenty-year Experiment at the "Groupe de Recherches Musicales"“
- Agostino Di Scipio „The Synthesis of Environmental Sound Textures by Iterated Nonlinear Functions, and its Ecological Relevance to Perceptual Modeling“
- Sylviane Sapir „Gestural Control of Digital Audio Environments“
- Matthew Burtner and Stefania Serafin „The Exbow MetaSax: Compositional Applications of Bowed String Physical Models Using Instrument Controller Subsititution“
- Nicola Bernardini and Davide Rocchesso „Making Sounds with Numbers: A Tutorial on Music Software Dedicated to Digital Audio“
- José R. Beltrán and Fernando A. Beltrán „Matlab Implementation of Reverberation Algorithms“
- Tapio Lokki and Matti Karjalainen „Analysis of Room Responses, Motivated by Auditory Perception“
- Nicola Bernardini and Alvise Vidolin „Sound Motion and Space Parameters on a Stereo CD“

Computer Music Journal (Vol 26/2) Summer 02

`mitpress.mit.edu/Computer-Music-Journal`

- David Huron „Music Information Processing Using the Humdrum Toolkit: Concepts, Examples, and Lessons“
- Bryan Pardo and William P. Birmingham „Algorithms for Chordal Analysis“
- David Løberg Code „Groven.Max: An Adaptive Tuning System for MIDI Pianos“
- Dominic Mazzoni and Roger B. Dannenberg „A Fast Data Structure for Disk-Based Audio Editing“
- Eduardo Reck Miranda „Emergent Sound Repertoires in Virtual Societies“

Computer Music Journal (Vol 26/3) Fall 02

„New Performance Initiatives"

- David Wessel and Matthew Wright „Problems and Prospects for Intimate Musical Control of Computers"
- Sergi Jorda „FMOL: Toward User-Friendly, Sophisticated New Musical Instruments"
- Ryan Ulyate and David Bianciardi „The Interactive Dance Club: Avoiding Chaos in a Multi-Participant Environment"
- Dominic Robson „PLAY!: Sound Toys For Non-Musicians"
- Marcelo Mortensen Wanderley and Nicola Orio „Evaluation of Input Devices for Musical Expression: Borrowing Tools from HCI"
- Jonathan Segel „New San Francisco Tape Music Center: Transparent Tape Music Festival"
- Benjamin R. Levy „Electroacoustic Music: The Continuing Tradition"

Computer Music Journal (Vol 26/4) Winter 02

„Future of Computer Music Software"

- Eric Lyon „Dartmouth Symposium on the Future of Computer Music Software: A Panel Discussion"
- Miller Puckette „Max at 17"
- David Zicarelli „How I Learned to Love a Program That Does Nothing"
- D. Gareth Loy „The CARL System: Premises, History, and Fate"
- James McCartney „Rethinking the Computer Music Language: SuperCollider"
- Carla Scaletti „Computer Music Languages, Kyma, and the Future"

Remix Magazine 2/03

www.remixmag.com

- u.a. Artikel zu Karlheinz Stockhausen

C D & D V D

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double CD compilation of electroacoustic music by twenty-eight composers from around the world

LDC 278 19/20, **Chrysopée Électronique 18**

Kompositionen von Natasha Barrett, Richard Karpen, Roland Cahen, Luigi Ceccarelli, Lothar Voigtländer, Jukka Ruohomäki, Yves Coffy, Graciela Castillo, Hans Tutschku, Daniel Zimbaldo, Lars-Gunnar Bodin, Pierre Boeswillwald,

LDC 278 11 21, **Chrysopée Électronique 19**

Kompositionen von Luis-MarieSerra

CLASSCD 342, Lars Graugaard plays **Pieces for flute and ISPW**

Philippe Manoury „Jupiter"
Takayuki Rai „Seven Refractions"
Cort Lippe „Music for Flute and ISPW"

x-tract x-t 2005, **Fresh**
Komponiert und dirigiert von John Duncan
Gespielt von zeitkratzer

x-tract x-t 2003, **vestige vertical**
Lothar Fiedler, guitars, electronics
Michael Vorfeld, percussion, string instruments
Michael Walz, sampling, electronics
Boris D. Hegenbart, live-electronics
Aleks Kolkowski, violin, electronics

www.podewil.de

Infogram 045/1, **Soundart I**

Josef Doukkali, Johannes Bergmark, Thomas Bjelkeborn, Christian Bock, Staffan Mossenmark, Leif Elggren, Anders Blomqvist, Josef Doukkali, Kent Tankred

Infogram 045/2, **Soundart 2**

Zbigniew Karkowski, Mats Lindström, Sören Runolf, Sten Hanson, Dror Feiler, Rolf Enström, Carl Michael von Hausswolff, Sören Runolf, Mikael Stavöstrand

SR 164, **Institute of Sonology 1959-69 Early electronic music**

Ton Bruynèl „Reflexen"
Rainer Riehn „Chants de maldoror"
Konrad Boehmer „Aspekt"
Frits Weiland „Studie in lagen impulsen"
Dick Raaijmakers „Piano-forte"
Gottfried Michael Koenig „Funktion Orange"

BRIDGE 9126, Paul Lansky **Alphabet Book**

Enhanced CD, Featuring artwork and animations by Grady Klein
www.bridgerecords.com

NSFTMC SF200, **Transparent Tape Music Festival**
The New San Francisco Tape Music Center would like to announce the release of a limited edition CD of music from the January 2002 Transparent Tape Music Festival. Included are Works by Kent Jolly, Thom Blum, Cliff Caruthers, Matt Ingalls, Joseph Anderson
www.cdemusic.org

Sargasso Records, **LEGACIES**

Released in BEAST's 20th anniversary season, this double CD celebrates some of the excellent composers who have worked in the Electroacoustic Music Studios at Birmingham over the past twenty years. All the composers represented here performed regularly with BEAST's unique sound diffusion system during their time at Birmingham – an experience which has added a particularly sculptural quality to many of the pieces in this collection. All but one are now teaching in the UK higher education sector, nurturing the next generation of creative sonic artists. Featuring work by Joseph Hyde, Andrew Lewis, Alistair MacDonald and others.
www.sonicartsnetwork.org

CRC 2605, CDCM Computer Music Series, Volume 33 **Toys in the Attic - Music from iMPACT**
www.centaurrecords.com

Grappa MD121, Joran Rudi **Routine Mapping (DVD)**

This DVD brings computer-generated sounds and stunning, beautiful images so intimately together that they seem to be the same thing. Hearing and seeing are but parallel ways of perceiving the process and the relationship of image to sound is that each articulates the other. Rudi sees one of is compositions in quasi constructivist terms, as „the exploration of a set of ratios through synthetic and natural sound", but in fact the result is so imaginative and new that we find ourselves in another world of strange yet believable shapes and sounds. The combinations of colors, the way the colors change in a delicate process, the way objects float and move without air suggest a place we've never been.
www.emfmedia.com

INTERNET & SOFTWARE

vvvv (Win)

vvvv.meso.net

vvvv is a toolkit for real-time video synthesis and controlling physical devices. It's a novel approach to creating media applications. vvvv was designed to facilitate large media environments with multiple computers, physical interfaces, audio, and real-time graphics that can simultaneously interact with many users. But that does not mean that you can't develop more modest applications with it.

vvvv is a graphical programming language that runs on PCs. It can be used to control a variety of different physical devices such as DVD players, distance sensors, and MIDI controllers.

Read more about vvvv's architecture, features, and hardware requirements on the Details page of this website:
vvvv.meso.net/toolkit_details.php

- Media Environments: vvvv can be used to develop large-scale installations using inputs & outputs from audio, video and external devices. Because vvvv has extensive support for many kinds of hardware such as motion and distance sensors, it is useful for creating exotic physical interfaces. And with its clustering & networking capabilities, vvvv can run synchronized on multiple computers to create huge panorama projections.
- Rapid Prototyping of Interactive Systems. The structure of vvvv's graphical programming language is ideal for making quick prototypes of more complex systems. Its clean and efficient user interface includes lots of handy shortcuts and usability featurettes.
- VJ Instruments. Create your own customized VJ applications to generate graphics that react to musical input. And use your preferred interface (a MIDI fader box or two touch panels or whatever suits your fancy) to further control your application.
- Interactive Art, Broadcast Design and Animation. vvvv's real-time 2D & 3D graphical output can be adapted for a

variety of uses. It generates full motion graphics in both full screen and windowed modes.

• Standalone Applications. vvvv patches, be they a 3D movies or screensavers, can also be turned into standalone applications and distributed.

DIPS (Linux, MacOS X)

DIPS, „Digital Image Processing with Sound" is released under GPL. To download DIPS, please access;

`www.dacreation.com/dips.html`

You may find two downloadable files and also README;

jMax-DIPS.app for Mac OS X (version 1.0.0)

jMax-DIPS i686-binary package for Linux (version 1.0.0)

DIPS is a set of Max objects that handles real-time visual image processing events and OpenGL functions in the jMax GUI programming environment. It enables the interaction between audio events and visual events in Max patches, thus strongly supports composers and artists to realize real-time interactive multimedia art.

The DIPS objects include more than a hundred OpenGL functions, VideoIn and QuickTime objects, various video effect objects, movie file handling objects, 3D model and particle handling objects, and so on. Since it doesn't need to be compiled we can work heuristically in real-time.

Takayuki Rai

`rai@kcm-sd.ac.jp`

flext (MacOS, Win, Linux)

flext - C++ layer for cross-platform development of Max/MSP and pd externals

`www.parasitaere-kapazitaeten.net/ext/`

Currently there exist two widely used modular systems for real-time audio that can be extended by self-written objects (so called "externals"):

Max/MSP (`www.cycling74.com`) and

Pure Data (`www.pure-data.org`).

Both come with APIs that are not very different, but as well not quite the same. Flext seeks to provide a unifying interface for the APIs of those real-time systems while also concentrating on making use of the advantages of the object orientation of the C++ language.

Consequently, flext allows to write externals (or libraries of a number of these), that can be compiled for both systems (with various compilers on a few platforms) without changes to the source code.

Thomas Grill

py/pyext - python script objects (Win, Linux)

`www.parasitaere-kapazitaeten.net/ext/`

This object library provides a full integration of the python scripting language into the PD (and in the future Max/MSP) real-time system.

With the py object you can load python modules and execute the functions therein. With pyext you can use python classes to represent full-featured pd/Max message objects. Multithreading (detached methods) is supported for both objects. You can send messages to named objects or receive (with pyext) with python methods.

Dervish (MacOS)

`goldbergs.com/dervish/`

Dervish is a somewhat idiosyncratic free-as-in-beer video mixing application for Mac OS 9 authored in cycling '74's max/jitter programming environment.

Joshua Goldberg

CPS 1.30 (now for Mac OS X)

`www.bonneville.nl/cps/`

CPS is a graphical environment where by placing blocks and wires, realtime interactive 'machines' can be created. These patches can process and generate realtime audio and MIDI.

CPS offers lots of blocks including MPEG-4 Structured Audio core opcodes and generators (derived from Csound), filters, envelopes, effects, etc. as well as VST plugin/instrument hosting, MP3 decoding, networking facilities, serialPort, and more.

CPS is different than traditional softsynths because it can also process (and generate) event-driven signals, which makes it suitable for composing electronic music and on-stage usage.

CPS can also be used standAlone (often for games) without graphical interface inside C++, Java, Director or online in a browser.

PortAudio (MacOS, Unix, Win)

We are pleased to announce the release of a new version, V19, of PortAudio, a free cross-platform, open-source, audio I/O library in 'C'. This new version of PortAudio adds support for Macintosh OS X, and has improved implementations for Unix/OSS and for ASIO on Mac and Windows. PortAudio is the result of a collaboration among dozens of audio programmers worldwide.

PortAudio lets you write audio programs in 'C' that will compile and run on:

• Windows using MME, DirectSound, or ASIO,

- Macintosh using SoundManager or ASIO on OS 8,9, CoreAudio on OS X
- Unix (Linux/Solaris/FreeBSD) using OSS,
- SGI, and BeOS.

PortAudio is intended to promote the exchange of audio synthesis software between developers on different platforms. It provides a very simple API for recording and/or playing sound using a simple callback function. Example programs are included that synthesize sine waves and pink noise, perform fuzz distortion on a guitar, list available audio devices, etc.

PortAudio is very easy to use and can be learned from the online tutorials. This makes it a good tool for teaching audio programming because students can focus on the signal processing instead of struggling with platform specific APIs.

PortAudio may be freely downloaded and used in your projects, commercial or otherwise, from:

`www.portaudio.com`

Phil Burk, Ross Bencina, and the PortAudio team

SuperCollider Free Version (MacOS 9)

Die Version 2.2.16 ist frei und läuft ohne jede Einschränkung als Vollversion.

`www.audiosynth.com`

SuperCollider 3, Developer Version (MacOS X)

SC3 für MacOS X ist zur Zeit noch in Entwicklung. Source-Files befinden sich unter:

`supercollider.sourceforge.net`

Eine ausführbare, in regelmäßigen Abständen aktualisierte Version (binary) findet man unter:

`www.mego.at/sc3`

SuperCollider 3, Developer Version (Linux)

Stephan Kerstens Port für Linux:

`www.cs.tu-berlin.de/~kerstens/pub`

Pulsargenerator 2001 (Mac)

is now available for free at:

`www.create.ucsb.edu/PulsarGenerator/`

IanniX (Mac)

La kitchen, creation and technological development center for arts, presents IanniX, a new graphic interactive application, continuing to follow the objectives of the UPIC, created by Iannis Xenakis.

The 0.53 version of this prototype software, working also on Mac OS X, is avalaible at the following address :

`www.la-kitchen.fr/IanniX_App_v0.53.zip`

The sources are available at the following address :

`www.la-kitchen.fr/IanniX_Dev_v0.53.zip`

You can get further informations on our website at the following address :

`www.la-kitchen.fr/iannix.html`

For more information, please contact

`info@la-kitchen.net`

Thierry Coduys

CsoundMixer

The stand-alone version of CsoundMixer is now available at

`www.csounds.com/csoundmixer/index.html`

Main Features

1. Easy-to-use GUI, just like a conventional audio mixer.

2. Up to three different RT Csound instrument can be played simultaneously.

3. VST plug-in support.

4. Featuring a built-in Piano-roll MIDI editor from "detonate" Max object.

5. Standard MIDI File support

6. Real-time k-value control for RT Csound instruments from CsoundMax

7. Fader automation support

Takeyoshi Mori

Cecilia (Win, Mac, Linux)

`music.ucdavis.edu/re4m/cecilia/`

Cecilia is a graphical user interface to Csound which allows musicians to harness the DSP power of Csound without the difficulty of learning Csound's orchestra and score language. Created by Alexandre Burton and Jean Piché, Cecilia is a tremendously powerful tool, and it's flexibility allows seasoned Csound users to create their own graphical tools for sound design. For quite some years, Cecilia has been available only to Macintosh and Unix users; but a new version, ported by Bill Beck, is now available for Windows at this website.

Sound Grid

Sound Grid is a JavaSound based application that allows composition in the Cartesian coordinate system. Rob Upson wrote the program as part of a Masters in Science Teaching at Portland State University. He is currently searching for software developers to add more features to the program. Your help is appreciated.

`sourceforge.net/projects/soundgrid`

GUIDOLib Open Source Project Announcement

The GUIDOLib project aims at developing a generic portable library for musical score graphical rendering. This library takes account of the conventional music notation system and should be flexible enough to include any graphical sign and musical information necessary for the contemporary music notation or for any other purpose requiring such extension. The project is to provide a simple API to musical applications that have to deal with graphical score processing. It is based on the GUIDO Music Notation format, but supports alternate formats under the form of converters or plug-ins in order to widen the library use.

The project originates from a work achieved at the Darmstadt University of Technology (Germany) and the University of British Columbia (Canada) by Holger Hoos, Keith Hamel , Jürgen Kilian and Kai Renz. It is now an open source project, which can be reached on the Source Forge repository at

`guidolib.sourceforge.net/`

If you are interested in any issue regarding the music representation, you are invited to join the project. You may contribute to the standard tasks identified by the project management, as well as the study of a general suitable API, which is to be discussed on the 'guidolib-dev' mailing list.

The open source project is actually supported by the Darmstadt University of Technology (Germany), the University of British Columbia (Canada) and Grame - National Centre for Music Creation (France).

Dominique Fober
`fober@grame.fr`

AGNULA: A GNU/Linux Audio distribution

The AGNULA (A GNU/Linux Audio distribution, acronym pronounced with a strong g) project, supported by the European Commission under the Key Action IV.3.3 (Free Software towards the Critical Mass) has started on April 1st and will last for 24 months up to March 2004. The project is coordinated by the Centro Tempo Reale in Firenze

`www.centrotemporeale.it`

and has the following partners:

IRCAM `www.ircam.fr`

Universitat Pompeu Fabra, Music Technology Group, Barcelona `www.iua.upf.es/mtg`

Kung Tekniska Högskolan (KTH), Stockholm
`www.speech.kth.se/music/performance`

Free Software Foundation Europe `fsfeurope.org`

Red Hat France `www.redhat.fr`

AGNULA's main goal will be the development of two reference distributions for the GNU/Linux operating system completely based on Free Software (i.e. under a FSF approved Free Software license) and dedicated to audio and multimedia. One distribution will be Debian-based (DeMuDi) and the other will be Red Hat-based (ReHMuDi). Both will be available on the network for download and on CD. In the second year the project will also extend to hardware platforms other than PCs (e.g. PowerPCs, 64-bit architectures).

A new website `www.agnula.org` is available with further information on the project. Other announcements will be posted on relevant mailing lists.

AGNULA c/o

Centro Tempo Reale, via Pisana 77 Firenze ITALY

`info@agnula.org`

Wedelmusic

`www.wedelmusic.org`

WEDELMUSIC Editor, January 2003 version, complete version for Video, Images, music scores, multimedia music building and fruition, edutainment, entertainment, a complete and fun experience with WEDELMUSIC. It is a full version, not a demo. It is a full version without time limit. It can be used for downloading and using protected file on if registered with a content provider.

WEDELMUSIC is an innovative idea to allow the distribution of interactive music via Internet totally respecting the publisher rights and protecting them from copyright violation.

WEDELMUSIC allows publishers and consumers (theatres, orchestras, music schools, libraries, music shops, musicians) to manage interactive music; that is, music that can be manipulated: arranged, transposed, modified, reformatted, printed, etc., respecting copyright. It is an innovative support for preparing performances, studying music, analysing music, learning instruments, distributing music at low cost, etc. The same music objects will be available for traditional media and Braille. These innovative features are possible thanks to the definition and implementation of

- a unified XML-based format for modeling music including audio, symbolic, image, document, etc.,
- reliable mechanisms for protecting music in symbolic, image and audio formats.
- a full set of tools for building, converting, storing, distributing music on the Internet

To distribute and receive music in symbolic format also allows to commercially exploit new functionalities for music consumers and, thus, it allows the opening of a new market for several specific applications.

Das Virtuelle Orchester (Mac)

Ein Projekt des Experimentalstudios der Heinrich-Strobel-Stiftung des SWR
`www.swr.de/faszination-musik /experimentalstudio /virtual_orchestra/deutsch/index.html`

Das virtuelle Orchester ist beim IRCAM, products and services, software erhältlich

Das virtuelle Orchester ist eine Multimedia-Bibliothek des zeitgenössischen Orchesters. Sie umfasst Samplebänke mit mehr als 15.000 Klängen, Bild- und Grafikmaterialien sowie eine detaillierte Dokumentation aller Klänge. Das virtuelle Orchester ist ein universelles Hilfsmittel für den Musiker im Tonstudio durch die Samplerfunktion, ein Lernsystem der zeitgenössichen Instrumentenkunde und Orchestration sowie eine Basis für akustische Recherchen.

Die Vielfältigkeit der modernen Instrumentaltechnik ist fast unüberschaubar geworden. Das virtuelle Orchester präsentiert Möglichkeiten, macht sie fasslich und ordnet sie nach den Bedürfnissen des Benutzers.

Wie klingt ein Ton, wie kann man ihn notieren, welche akustischen Bestandteile hat er? Wie wird er erzeugt? Wie klingt er im orchestralen Akkord? Wie sieht das erzeugende Instrument aus?

Das virtuelle Orchester ermöglicht dem Benutzer, das klassische und zeitgenössische Klangbild eines Instruments sowie dessen Möglichkeiten im Zusammenspiel zu hören. Er kann Erfahrungen mit Instrumenten, gespielt von erstklassigen Instrumentalisten sammeln, die ihm meist nicht zur Verfügung stehen. Die Materialien sind als Dateien leicht zugänglich.

Die Datenbank enthält drei verschiedene Software-Anwendungen:

- ISIS ist ein Multimedia-Lexikon, das über eine intuitive Suchfunktion Zugriff auf die Klänge, Graphiken, Fotos und zugehörigen Informationen erlaubt. Eine Fülle von Informationen werden für jeden Klang angeboten.
- ISIDOR ist ein Editierrsystem, das Orchesterakkorde wirklichkeitsgetreu wiedergibt.
- OSIRIS ist ein Software-Sampler. Mehr als 1000 Klangbänke können ausgewählt werden

Das virtuelle Orchester enthält 32 Instrumente des Orchesters: Holzbläser, Blechbläser, Streicher, Schlagzeug, Klavier, Akkordeon sowie Software, Daten und Dokumentation in englisch, deutsch und französisch

Thomas Hummel

Iowa Musical Instrument Samples database

An expanded version of the University of Iowa Musical Instrument Samples database is freely available online at
`theremin.music.uiowa.edu`

We now have 15 orchestral instruments recorded in an anechoic chamber playing note-by-note chromatic scales at three dynamic levels. Several playing techniques (vib, non-vib, bowed, and plucked) are represented. We also have three full sets of (non-anechoic) stereo piano tones.

Lawrence Fritts

EyesWeb 3.0 (Win)

`infomus.dist.unige.it/eywindex.html`

An intuitive visual programming language allows to map – at different levels - movement and audio into integrated music, visual, and mobile scenery. EyesWeb has been designed with a special focus on the analysis of expressive content in movement, midi, audio, and music signals. EyesWeb is the basic platform of the MEGA (Multisensory Expressive Gesture Applications) IST-20410 EU Project.

The software runs on Win32 and is based on the Microsoft COM/DCOM standard; supports Steinberg VST and ASIO; supports OSC (Open SoundControl).

EyesWeb libraries include (from version 2.5):

1. Input: support for frame grabbers (from webcams to professional videocameras), wireless on-body sensors (e.g. accelerometers), audio and MIDI input, serial, tcp/ip, etc;

2. Math and filters (e.g. preprocessing, modules for signal conditioning, etc.);

3. Imaging (processing and conversions on images)

4. Sound and Midi Libraries

5. Communication (e.g. Midi, OSC, tcp/ip, serial, DCOM)

6. Motion Analysis Library: MoCap datatype; motion trackers (e.g., LK trackers, Multiple colored blobs tracking), modules for extraction of "expessive cues" from movement; General Space analysis; ...

7. Mapping: support for shapes and spaces, trajectory, affective decision maker, ...

8. Output: visual (2d and 3D), audio, MIDI, serial, tcp/ip, ...

Jade (Mac)

composition and performance software for interactive music, video, theater, and installation art.

Jade will be useful to anyone interested in time-based performance where technology plays a role, fast prototyping of audio or video effects chains, gestural control of parameters, and numerous classroom applications, and will vastly speed production time for users of Cycling'74's Max/MSP and Jitter.

Jade is a standalone environment for the production of interactive art, video, music, and theater. It uses a highly optimized scripting engine to load, manage, and automate modules which perform sound/movie playback and recording, digital effects processing, mixing/matrix-routing, various video and audio analysis, and spatialization. Additional modules can be built quickly using Jade's software development kit and Cycling'74's Max, though Max is not required to use Jade.

The unique infrastructure of Jade allows for easy management of complex and dynamic mapping strategies. All parameters can be automated using linear or non-linear time-structures.

Jade includes support for Apple's QuickTime architecture, OpenGL, and Steinberg's VST plug-in format.

Jade is now available directly from Silicon Prairie Intermedia

Multi-user site-licenses are also available. A limited functionality performer's version is available for download from the company's website at
`www.sp-intermedia.com`

Videosynthesizer

Historischer Überblick sowie viele Artikel und Links zum Thema

`www.audiovisualizers.com /toolshak/vsynths.htm`

außerdem Links zu aktuellen Softwares:

`www.audiovisualizers.com /toolshak/vjprgpix/softmain.htm`

Csound Magazine Summer 2002

`csounds.com/ezine`

- Reginald Bain „Classic Waveshapes and Spectra"
- Jacob T. Joaquin „Harmonic Trees"
- Michael Rhoades „Linux RH 7 Win 2K"
- Josep M. Comajuncosas „Developing a Fully Featured Multieffects Unit in Csound"
- Ian Sayer „Simulating Hard Sync in Csound"
- Dave Phillips „The 10-Minute Guide to Installing Cecilia for Linux"

Indigenous to the Net

`www.sfmoma.org/crossfade/`

A web-based article created by Chris Brown and John Bischoff which documents the history of Computer Network Music in the Bay Area, is now available on the web. The article includes numerous archival images,audio excerpts, QuickTime movies, and extensive commentary on the history and working methods of The League of Automatic Music Composers (1978 - 1983) and the Hub (1986 - 1997), the world's first computer network bands. It appears on the 'crossfade' website, as Part 1 of an internet music project sponsored by the San Francisco M useum of Modern Art in collaboration with the Walker Art Center in Minneapolis, and ZKM inKarlsruhe, Germany. Part 2 of the project, which will be forthcoming, is the installation of two new web-based music compositions by Brown and Bischoff. Both works will invite participants to logon via the internet and play in real-time interaction with others, while hearing the combined musical results on theirl ocal computer. Please stay-tuned for further announcements about the availability of Part 2.

Eigenwelt der Apparatewelt
Pioniere der elektronischen Kunst

This catalog has been published on the occasion of the exhibition:

EIGENWELT DER APPARATEWELT

PIONIERE DER ELEKTRONISCHEN KUNST

June 22 - July 5, 1992
Oberösterreichisches Landmuseum
Francisco Carolinum, Linz
ARS ELECTRONICA 1992

`www.artscilab.org/eigenwelt`

240 Seiten PDF Dokumentation des Katalogs in Einzelkapiteln zur gleichnamigen Ausstellung in Rahmen der Ars Electronica 1992

H A R D W A R E

Kroonde

La Kitchen is pleased to present the KROONDE, a new wireless sensor interface for real time applications like MAX and Pure Data.

For information, please go to :
www.la-kitchen.fr
/hardw/presentation_en.pdf

The Kroonde is a wireless captation system dedicated to real time applications. The captation system (4,5 x 2,7 x 1 in) can simultaneously integrate up to 16 sensors. It has an autonomy of 10 hours with a 9V battery, and weights less than 150 grams (battery included). The sensors are connected to the wireless transmission box through two connectors (maximum 8 sensors by connector). The effective HF range varies from 100 ft in a difficult environment, to 300 ft outside, on 433Mhz frequency. The HF base (1U Rack) gets informations from sensors and transmits this at a high bandwith to a computer (Ethernet (10MB/s), UDP network protocol), with a precision of 10 bits by sensor.
The Kroonde is also MIDI compatible.

The Kroonde system allows communication through three different protocols. All UDP communications transit via socket N° 1234 to socket N° 5678.

- OSC: Open Sound Control Protocol is compatibThe with both Max objects and with AAASeed

  www.lagraine.com/fra/aaaseed/
- binary: Compatible with PD object standard : netreceive.
- MIDI: Control exchange is transmitted from 0 to 7 or 15 on the MIDI channel n° 11.

Toaster

La kitchen, center of creation and technological development for the arts, is pleased to present the TOASTER, a new sensor interface for real time applications.

The Toaster gets analogical information from sensors and transmits them to one computer or more with a high band (Ethernet (10Mb/s), UDP network protocol), with a precision of 16 bits by sensor. It is dedicated specially for MAX and Pure Data.

For more information, please go to :
www.la-kitchen.fr/
kitchen.lab/hardware/toaster-en.html

For technical information, please contact Cyrille Henry, our engineer at La kitchen
Cyrille.Henry@la-kitchen.fr

Eobody

forum.ircam.fr

Eobody (Analog to MIDI Converter) is a sensors to MIDI interface designed to simplify the design of new gestural controlers or interactive sound installations using sensors.It converts analogue signals generated by sensors to MIDI messages which will be received by a sound generator and used as control parameters (volume, panoramic, reverberation etc.). The MIDI messages coding the gesture act directly on the sound, making the whole system as a new musical instrument. Eobody will transmit the sensors signal to the computer under digital form, through the MIDI standard. Eobody is fully compatible with any kind of device featuring a MIDI interface (MIDI port) and makes a real bridge between the analogue world of sensors and digital audio control by gestures.
Technical specs

- 3 potentiometers and 4 buttons for control and settings
- 16 CV in
- 1 MIDI in, 1 MIDI out
- Up to 16 channels MIDI transmission, user programmable
- MIDI channel programmable for each input
- 7 or 10 bit resolution controlers
- Configuration by software provided
- Sub-D 15 pins + epanouis
- 9 V DC power supply

New user interface for live performance

www.jazzmutant.com

JazzMutant, a team of Bordeaux, France-based musicians, sound engineers, programmers (Franck Stofer, Guillaume Largillier, Julien Olivier and Pascal Joguet) are developing a dedicated modular controller to address live performance needs relating to Max / MSP. Their portable controller utilizes the tactile skills of the user is a touchpanel-based controller with all the necessary hardware and software to setup, display and manipulate sophisticated user interfaces.

Call for Works

X mal „90 Sekunden Wirklichkeit“ die nächste DEGEM-CD

Gedacht als eine vielschichtige Anthologie aktueller elektroakustischer Musik, soll die nächste DEGEM-CD unter dem Motto stehen „90 Sekunden Wirklichkeit“. Das heißt: jedes Werk soll möglichst genau 90 Sekunden Dauer haben und sich auf die Wirklichkeit, den Lebens- oder Arbeitsraum, den Alltag beziehen - als Realitätssplitter, reduziert oder expansiv. Die Stücke sollten nach Möglichkeit eigens für dieses Projekt entstehen. Natürlich kann jeder Teilnehmende auch mehr als nur eine Komposition einreichen.

Bitte schicken Sie die Materialien (CD- oder DAT-Aufnahme, Werkkommentar und eine deutsche wie englische Biographie) an:

Stefan Fricke
c/o Pfau-Verlag
Hafenstraße 33
D 66111 Saarbrücken

Call for Works: Max Brand Preis 2003

Max Brand, Komponist und Elekronikpionier (1896-1980), verfuegte testamentarisch, dass die kuenftigen Einnahmen aus den Auffuehrungen seiner Werke als Preis fuer junge, zeitgenoessische KomponistInnen auf dem Gebiet der Elektroakustik und erweiterter Bereiche vergeben werden soll.

Der international ausgeschriebene Preis ist 2003 mit EUR 5000,- dotiert und wird am 26.04.2003 im Rahmen von "moving patterns - A week-long program of electronic music" im Austrian Cultural Forum in New York ueberreicht.

Max Brand verstand elektronische Musik als Allgemeingut. Er erkannte das Potenzial der neuen Technologien fuer die Produktion. Seine vielseitigen Arbeitsweisen stehen fuer Innovation:

- Komposition und Improvisation (fuer Malerei, Licht, Buehne, Werbung, ...)
- Entwurf und Entwicklung eines eigenen Instruments
- Personalised Vision: Eigenwilligkeit, Risikobereitschaft und Kompromisslosigkeit
- Jenseits von E und U

Dieser Aufruf wendet sich ausdruecklich an Kuenstlerinnen aller Genres und Stilbereiche ohne Einschraenkungen hinsichtlich Ausbildung, Nationalitaet, Alter oder Bekanntheitsgrad.

Einzureichen ist eine Arbeit pro TeilnehmerIn bzw. Gruppe auf Audio-CD oder DVD (in sendetauglicher Aufnahmequalitaet) sowie dazugehoerende Konzeptunterlagen. Es koennen auch bereits veroeffentlichte Werke eingereicht werden.

Einreichungen werden bis 15.03.2003 (Datum des Poststempels) gerne unter folgender Adresse entgegengenommen:

mica - music information center austria
Max Brand Preis 2003
Stiftgasse 29
1070 Wien
Austria

Alle TeilnehmerInnen werden nach Bekanntwerden der Preistraegerin/des Preistraegers verstaendigt.

Kennzeichnung:

- Name, Adresse, Telefonnummer, Titel des Werkes, Entstehungsjahr
- Die Einreichung ist verschlossen mit dem Kennwort "Max Brand Preis 2003" zu versehen.

Wettbewerbsbedingungen:

- Es wird keine wie immer geartete Haftung fuer die eingereichten Unterlagen uebernommen.
- Jede Bewerbung erfolgt unter Ausschluss des Rechtsweges.
- Auf Wunsch werden die Einreichungen auf Kosten der TeilnehmerInnen zurueckgesandt.
- Durch die Teilnahme am Wettbewerb erklaeren sich die TeilnehmerInnen mit den Bedingungen einverstanden (s. Anmeldeformular).

Die Jury setzt sich aus Vertretern der Erben Max Brands, MusikerInnen, MusiktheoretikerInnen und JournalistInnen zusammen. Praemiert werden innovative elektronische, elektroakustische und verwandte Arbeiten aus allen Musikbereichen.

Vertreter der Max Brand Erben in Kooperation mit:
Austrian Cultural Forum, NYC;
mica - music information center austria
phonoTAKTIK

Medienpartner:
ORF Oe1 ZEITTON

Einreichunterlagen sowie das Anmeldeformular finden Sie unter:
`www.acfny.org/fs.asp?EID=2`

Call for Works: CYNETart 03

Internationaler Wettbewerb für computergestützte Kunst

Trans-Media-Akademie Hellerau e.V.in Kooperation mit der Landeshauptstadt Dresden

www.cynetart.de

Einsendeschluß: 31.März 2003

Das seit 1997 jährlich stattfindende internationale CYNETart Festival zeigt Möglichkeiten des künstlerischen Umgangs mit den neuen Medien. Der inhaltliche Schwerpunkt liegt in der Veränderung der Wahrnehmung durch die neuen Medien. Zur Teilnahme am diesjährigen Wettbewerb sind Medienkünstler, aber auch interdisziplinär arbeitende Wissenschaftler oder Computerspezialisten aufgefordert. Kriterien für die Preisvergabe sind vor allem künstlerische Qualität sowie das Konzept in seiner medienspezifischen Umsetzung. Schwerpunkte bilden seit einigen Jahren interdisziplinäre Projekte sowie Beiträge zur Schaffung offener kybernetischer Systeme.

Preise

Die international zusammengesetzte Fachjury bestimmt spartenübergreifend insgesamt maximal 4 Preisträger und spricht ca. 12 Anerkennungen aus. Das Preisgeld von 20.000 EURO wird von privaten Unternehmen gespendet.

Präsentation

Eine Auswahl der eingereichten Projekte wird zum internationalen CYNETart Festival voraussichtlich im Mai 2004 präsentiert. Die Auswahl wird von den Veranstaltern getroffen. Darüber hinaus werden alle ausgezeichneten und präsentierten Werke in einem Katalog, der zum Festival erscheint, vorgestellt.

Kategorien

- realtime processing (Echtzeitbebarbeitung)

Eingereicht werden können Installationen oder Performances, die mittels eines Interfacesystems und Analyseprogramms Bewegung im Raum, Geräusche oder andere Parameter von Besuchern oder Performern in Echtzeit zu Bild, Text, Klang, etc. umwandeln.

- audio processing, visual processing (Klang-, Bildbearbeitung)

Die digitale Bearbeitung/Verwandlung/Prozesshaftigkeit ist thematischer Bestandteil der Arbeit. Eingereicht werden können Audio Projekte/Kompositionen, grafische Arbeiten, Videoarbeiten, Performances (z.B. Bereich vj-ing)

- net projects (Netzprojekte)

Arbeiten, die das Netz als Kunstform verstehen.

- software (Programme)

Der Schwerpunkt des Beitrages liegt im selbstprogrammierten Werkzeug. Das Programm dient als Grundlage zur Erweiterung der menschlichen Wahrnehmung.

Spartenübergreifende Projekte sind möglich und erwünscht. Aufgrund des Projektschwerpunktes muss jedoch eine Zuordnung zu einer Kategorie erfolgen.

Einsendungen

Einsendeschluss ist der 31. März 2003 (für Einsendungen gilt das Datum des Poststempels).

Zu einer Einreichung gehört das ausgefüllte Anmeldeformular, evtl. ergänzende Unterlagen sowie das Werk selbst (z.B. Internetprojekt) oder eine Dokumentation des Beitrages (zwingend z.B. bei Performances und Installationen). Keine wertvollen Originalarbeiten einsenden.

Wenn die Anmeldung über das Online-Formular erfolgt, ist bei der Postzusendung ein entsprechender Verweis beizufügen. Sie erhalten eine Eingangsbestätigung per Email.

Wettbewerbszulassung

Die Teilnehmer erhalten eine Bestätigung über den Eingang der Anmeldung. Jede Einreichung erhält eine Registrier-Nummer, die nach Erhalt bei jeder Kommunikation anzugeben ist.

Wenn die Teilnahmebedingungen nicht erfüllt werden, wird die eingereichte Arbeit zum Wettbewerb nicht zugelassen und der Jury nicht vorgelegt. In diesem Fall erfolgt eine Benachrichtigung.

- Einreichung in deutscher oder englischer Sprache.
- Jeder Teilnehmer (oder Autorenteam) darf für den Wettbewerb höchstens zwei Arbeiten einreichen.
- Werke, die schon einmal mit einem CYNETart Preis prämiert wurden oder eine Anerkennung erhalten haben, dürfen nicht wieder eingereicht werden.
- Die Fertigstellung der Arbeit darf nicht länger als zwei Jahre zurückliegen (Jahr der Fertigstellung 2001, 2002 oder 2003).
- vollständig ausgefülltes Anmeldeformular
- Die Anmeldung erfolgt vorzugsweise online oder mit dem ausgedruckten PDF-Dokument.

  Sie beinhaltet u.a.kurze Darstellung des Projektkonzeptes, Technische Angaben (Hard-/Software) zur Produktion, Angaben zu eigens entwickelter Software/ Programmierung, Technikliste zur Werkspräsentation, falls erforderlich, biografische Angaben zum Autor bzw. zu den Hauptautoren
- Einsendung einer Kopie des Beitrags auf gängigen Medien oder einer Dokumentation des Werks
- Rücksendung: Die Einreichungen (einschließlich

Projektbeschreibungen) werden einbehalten. Im Falle einer erwünschten Rücksendung sind innerhalb der Bundesrepublik Deutschland Briefmarken und im Ausland 10 Euro oder 10 US $ beizugeben.

- Katalog: die ausgestellten Werke werden im Katalog der zur CYNETart erscheint, dokumentiert. Die Teilnehmer erhalten die Möglichkeit zur Veröffentlichung von Texten.

Postsendungen

Trans-Media-Akademie Hellerau e.V.
CYNETart
Karl-Liebknecht-Straße 56
01109 Dresden
GERMANY

Call for Works: Karl-Sczuka-Preis

`www.swr2.de/sczuka/index.html`

Der 1955 erstmals verliehene und nach dem Hauskomponisten der SWF-Gründerjahre benannte Karl-Sczuka-Preis wurde zunächst für Hörspielmusik vergeben und ist nach Satzungsänderungen der Jahre 1969-72 zur wichtigsten Auszeichnung für avancierte Werke der Radiokunst geworden. Am jährlichen Wettbewerb nehmen Bewerberinnen und Bewerber aus den Bereichen Hörspiel und Medienkunst, Radioliteratur, Musik und ars acustica teil. An sie kann der mit 25.000 Mark dotierte Hauptpreis oder der 1997 gestiftetet Karl-Sczuka-Förderpreis in Höhe von 10.000 Mark vergeben werden.

Nächster Einsendeschluss: 15. Juni 2003

Die Preisverleihung findet seit 1972 während der Donaueschinger Musiktage statt.

Informationen zu den Teilnahmebedingungen:

Sekretariat des Karl-Sczuka-Preises
Leitung: Hans Burkhard Schlichting
Südwestrundfunk,
76522 Baden-Baden
Telefon ++49-(0)7221-929-2722
FAX: ++49-(0)7221-929-2072

`sczuka@swr.de`

Call for Works: Prix Ars Electronica

`www.aec.at/en/index.asp`

Zum 17. Mal lädt der Prix Ars Electronica zur Teilnahme am weltweit höchst dotierten Wettbewerb für Cyberarts ein. Die Kategorien 2003: Net Vision/Net Excellence, Interaktive Kunst, Computer Animation/Visual Effects, Digital Musics and u19 - freestyle computing.

- Eingereicht werden kann nur jeweils ein Werk pro Einreicher und Kategorie (ausgenommen in Net Vision / Net Excellence, wo je ein Werk pro Subkategorie zulässig ist).
- Das selbe Werk kann nicht in unterschiedlichen Kategorien eingereicht werden.
- Neben den von Teilnehmern eingereichten Arbeiten kann auch jede Jury Werke als Einreichung vorschlagen. In diesem Fall wird der betroffene Künstler vor der Jurysitzung kontaktiert
- Aus produktionstechnischen Gründen muss das gesamte Material so rechtzeitig eingesandt werden, dass der Einsendeschluss (20. März 2003, Datum des Poststempels) eingehalten wird.
- Wir ersuchen, keine Originale einzusenden - das eingereichte Material kann nicht retourniert werden!
- Einreichungen ohne die erforderlichen Begleitmaterialien werden nicht angenommen.
- Jeder Teilnehmer bzw. jede teilnehmende Institution erhält ein Exemplar der in Buchform erscheinenden Dokumentation "CyberArts 2003 / International Compendium - Prix Ars Electronica" als Anerkennung. Das Buch wird Ende 2003 zugesandt.
- Die speziellen Einreichbedingungen finden Sie bei den jeweiligen Kategorien.

Aus organisatorischen Gründen bitten wir darum, ihr Werk ONLINE einzureichen. Ein entsprechendes Formular finden Sie bei der jeweiligen Kategorie.

Stellen Sie bitte sicher, dass Ihren eingereichten Materialien ein von Ihnen im Original unterzeichneter Ausdruck der ONLINE-Einreichung beigelegt wird.

* Sobald Ihre Materialien (Bänder, DATs etc.) bei uns eingelangt sind, erhalten Sie automatisch eine Teilnahmebestätigung per E-Mail.

Einsendeschluss

20. März 2003 (Datum des Poststempels)

Bitten senden Sie ihre vollständige Einreichung rechtzeitig an:

ORF/ Prix Ars Electronica 2003
Europaplatz 3
A-4021 Linz (Austria)

Die Gewinner (Goldene Nica, Auszeichnungen, Anerkennungen) werden bis spätestens 31. Mai 2003 verständigt.

Die Ergebnisse werden auf der Website `prixars.orf.at` ab etwa Mitte Mai 2003 veröffentlicht. Das Buch „CyberArts 2003“ wird jedem Teilnehmer bis Jahresende zugesandt.

Die Preisträger (Goldene Nica und Auszeichungen) verpflichten sich, die Preise persönlich entgegenzunehmen

und ihre Arbeiten im Rahmen eines Vortrags beim Prix Ars Electronica Forum am 9. und 10 September 2003 dem Publikum vorzustellen. Gruppen und Institutionen werden ersucht, einen (oder maximal zwei) Repräsentanten zu benennen. Die Preisträger werden auf der Basis von Economy-Flügen nach Linz eingeladen.

Buch „CyberArts 2003"

Auch in diesem Jahr wird der Wettbewerb wieder in Buchform dokumentiert. Das „CyberArts 2003 - International Compendium Prix Ars Electronica" dokumentiert die 15 besten Einreichungen in jeder Kategorie in Text und Bild (deutsch/englisch) und enthält die Namen und Adressen aller Wettbewerbsteilnehmer.

VHS/DVD

CyberArts 2003 - Die besten Werke der Kategorie Computer Animation / Visual Effects

VHD/DVD/CD-ROM

CyberArts 2003 - Die besten Werke der Kategorie Interaktive Kunst

VHD/DVD/CD/CD-ROM

CyberArts 2003 - Die besten Werke der Kategorie Digital Musics.

ORF/Prix Ars Electronica behalten sich vor, die tatsächliche Umsetzung der genannten Publikationen aus technischen und/oder zeitlichen Gründen abzuändern. Alle eingereichten Text-, Bild-, Video- und Audiomaterialien dürfen im Zusammenhang mit dem Prix Ars Electronica-Archiv und dem digitalen CyberArts-Bucharchiv im Internet publiziert werden.

DIGITAL MUSICS

Diese Kategorie des Prix Ars Electronica ist offen für

- Electronica (wie Drum'n Bass, Dub, Techno, Downtempo, Ambient, Breakbeat, Global, HipHop, Jazz, Noise, Mondo/Exotica, digitale DJ-Culture etc.)
- Klang und Media (wie Klangskulpturen, Intermedia/-klanggesteuerte Visuals, Performances, Klangraumprojekte, Installationen, Radioarbeiten, Net-Music, Generative Musics etc.)
- Computer-Kompositionen (elektroakustisch, akusmatisch und experimentell).

Pro Teilnehmer kann ein Werk eingereicht werden, das innerhalb der letzten beiden Jahre geschaffen/realisiert wurde.

Alle Einreichungen werden von einer Expertenjury in der Reihenfolge des Einlangens und nach folgenden Kriterien bewertet:

- Ästhetik, Originalität
- Fesselnde Konzeption
- Innovation im besonderen Ausdruck der klanglichen Imagination
- Technik und Qualität der Präsentation

Senden Sie bitte ihre Einreichung auf CD, DAT oder DVD Audio bzw. Superaudio-CD. Projekte wie Klanginstallationen, Echtzeit-Performances, audiovisuelle Habitats u. Ä. sind als Video-Dokumentation einzureichen (VHS, 3-10 Minuten). Diese Dokumentation soll nicht nur das Ereignis selbst beschreiben, sondern auch die Charakteristiken der Werkumgebung abseits der Musik, d.h. räumliche und technische Anforderungen für die Realisierung des Projekts. Zusätzlich zum eigentlichen Werk sind auch Informationen zum Equipment, Partituren, Setups, wenn möglich Illustrationen und Skizzen einzureichen.

Reichen Sie zusätzlich zum Gesamtwerk einen 2- bis 3-minütigen Auszug ein, der eine repräsentative Zusammenfassung der wichtigsten im Werk selbst behandelten Elemente enthält. Dieser Extrakt kann ein komprimierter Remix verschiedener musikalischer Bereiche des längeren Werks sein, der Teilnehmer kann aber auch einen repräsentativen Ausschnitt einsenden. Diese Kurzfassung hilft der Jury, einen konzentrierten Überblick über die Vielzahl der zu bewertenden Einreichungen zu erhalten.

Im Hinblick auf eine eventuelle Aufführung des Werks beim Ars Electronica Festival 2003 wird um präzise Information zum technischen Setup und nötigen Equipment ersucht sowie um Vorschläge für eventuelle Operatoren, Spieler oder Solisten, die bei der Umsetzung der von Ihnen vorgelegten Plänen helfen können.

Call for Works: Genesis Opera Project

`www.genesisfoundation.org.uk`

Creative teams (consisting usually of a composer and writer, but including other creative collaborators if desired) are now being invited to apply for the Genesis Opera Project (formerly The Genesis Prizes for Opera).

We are looking for new, young composers who have never before had a work for opera or music theatre published or produced on stage. Composers should be 35 years of age or younger; but writers and other collaborators can be any age. A composer can, of course, write his or her own libretto or adapt a work; but the subject matter must be from the 20th or 21st century in all cases.

Our panel will select a number of projects to commission to a Workshop Stage; these will be presented to the panel and an invited audience in Spring 2004. Projects that are then deemed ready for completion and production will be fully commissioned by the Foundation and presented fully staged in 2005.

Application forms and further information, such as the rules for submission, are posted on the web site as downloadable PDF documents and are being advertised internationally to encourage as wide a range of participants from all over the world as possible.

The Genesis Opera Project is set up to invite and challenge young artists new to the art form of opera or music theatre and hoping to help create a new language in this form for the 21st Century.

We especially hope to attract musical and theatrical artists who have not considered opera as a medium before and to enable them to enter into this field and develop their ideas.

As well as giving opportunities to young composers and writers, the Genesis Opera Project aspires to create a platform for the best young directing, design and musical talent from all over the world - a series of works truly international in reach, approach and ambition.

Deadline for applications is 14 April 2003

Call for Works: Salvatore Martirano Memorial Composition Award 2003

Eligibility: Any composer, regardless of age or nationality.

Award: Cash award of $1000 and a performance by the University of Illinois New Music Ensemble in September of 2003 at the Krannert Center for the Performing Arts. Additional awards and performances may be given at the discretion of the judges.

Judges: A panel of judges consisting of University of Illinois music composition faculty members will select the winning composition. The winning composer is expec-ted to attend the award concert / reception and will be responsible for their transportation costs (the competition will provide a stipend for lodging). The winning composer will assume full responsibility for providing adequate performance materials upon request.

Medium: Full scores of any style or aesthetic direction for one to ten performers (including vocalists) may be submitted. Works for tape, electronics and/or mixed media with or without instruments/voices are eligible.

Duration: 20 minutes maximum

Limit: One entry per composer

Entry fee: A non-refundable entry fee of fifteen U.S. dollars ($15.00)

Anonymous Submission:

Return of Materials: Scores will not be returned unless a self-addressed, stamped envelope of the proper size is enclosed.

All submissions must be postmarked by February 14, 2003

2003 Martirano Composition Award
Attn: Zack Browning, Coordinator
2136 Music Building
University of Illinois
1114 West Nevada
Urbana, IL 61801 USA
zbrownin@uiuc.edu

Call for Scores: quartett22

Call for scores for 2 clarinets (from Eb-flat to Bassclarinet) and 2 saxophones (from Sprano - to Bariton-Saxophone)! Selected scores will be performed by the new founded quartett22 throughout Austria. Works including live electronics or tape are welcome. There is no deadline for this project as it is on going, and we invite works in any style. It is also possible to take part at the forthcoming composition competition for the quartett22 organized by mica Austria.

Petra Stump & Heinz-Peter Linshalm
Neubaugürtel 39/23
A-1150 Vienna, Austria
Tel/Fax: +43-1-9475050
stump-linshalm@chello.at

Call for Works: SCRIME Prize 2003

International competition of electroacoustic music

Calling electroacoustic musical works for the Prix SCRIME 2003 competition

Works entered in the competition must be - acousmatic music - by composers born after January 1, 1968, and be between 8-15 minutes in length.

Two prizes will be awarded among the 6 preselected finalists presented in concert: the "Prix SCRIME 2003" (award: 1.500); the "Prix du Public" (award: 700).

A CD of the finalists, co-edited by the Ina-GRM, will be made in the year that follows the competition.

Deadline for entries: March 15, 2003

Results of Preselection (finalists): April 15, 2003

Concert of finalists and accordance of prizes: May 06, 2003 at the Moliere Scene d'Aquitaine in Bordeaux.

Rules and additional information available
Christian Eloy
Université Bordeaux 1 - Sciences Technologies
351 cours de la Libération
33405 Talence cedex, France
scrime@scrime.u-bordeaux.fr
www.scrime.u-bordeaux.fr

Call for Works: Earplay 2003

Donald Aird Memorial Composers Competition

Earplay announces the second annual Earplay Composers Competition.

Composers of any age or nationality may submit works for one to seven performers, of any duration, selected from the following instruments: Flute (Piccolo/Alto), Clarinet (Bass Clarinet)Oboe, Piano, Percussion, Violin, Viola, Cello. Works with electronics will also be considered.

A prize of $500 will be awarded to the winning work, which will be performed during the 2003/2004 season. The winner will be announced in May.

The judges reserve the right to not award a prize if no composition is deemed prize-worthy. All entries may be considered for performance.

There is an entry fee of $25 for one score, or $20 per score if more than one is submitted.

The postmark deadline is Monday, March 17, 2003.

Please send: score(s) [anonymous], recording(s) (CD, DAT, or cassette), if available [anonymous], a sealed envelope containing an information sheet with the work's title, composer's name, address, telephone, and e-mail, entry fee, a self addressed stamped envelope for return of materials (international submissions cannot be returned)

Earplay 2002 Composers Competition
P.O Box 192125
San Francisco
CA 94119-2125, USA

earplay@earplay-sf.org
www.earplay-sf.org

Call for Works: 24th Irino Prize for Chamber Music, 2003

International Composers Competition

The Irino Prize was founded in 1980 in honor of the late Yoshiro Irino, one of the most respected Japanese composers of his generation. The prize is administrated by The Irino Prize Foundation which was established after his death, on June 23,1980, by Mrs. Reiko Takahashi Irino with the collaboration of renowned composers Maki Ishii, Joji Yuasa and Yori-aki Matsudaira. The Irino Prize is awarded to young composers who explore new directions, and demonstrate innovative creativity. The Irino prize category alternates yearly, and is given for orchestral works in even years, and chamber works in odd years.

Submission Category: Submission must be limited to one composition. Composition should be scored for not more than twelve players with or without tape. Instrumental music with a live-computer component can also be submitted. Tape music without an instrumental component cannot be submitted.

Eligibility: Any nationality. Composers must be less than 35 years old as of June 23, 2003. Composition must have been premiered between January 1, 2001 and December 31, 2002 and must not have received any previous prizes.

Duration: Any duration is acceptable.

Deadline: The entry must arrive by April 30, 2003 by post.

Entry Fee: None.

Award: 200,000 Japanese Yen

Submission Details: Composer should submit the followings: 1) application form 2) score 3) recording of previous performance (on cassette tape or CD) 4) program of the first performance. All materials with the application form should be sent to the Irino Prize Foundation, Japan. All scores and recordings will be kept in the archive of the JML.

The Irino Prize Foundation
Mrs. Reiko Takahashi Irino, President
c/o JML Seminar,
Yoshiro Irino Institute of Music
5-22-2 Matsubara, Setagaya-ku,
Tokyo 156-0043, Japan
tel: +81-3-3323-0646
fax: +81-3-3325-5468

jml-irinopz@nyc.odn.ne.jp

Call for Works: City Of Klagenfurt Composition Prize 2003

Composers of any nationality, female or male, are invited to take part in the 9th Composition Prize: City of Klagenfurt „Gustav Mahler" Composition Prize 2003.

The compositions entered must not have been published or first performed at any time prior either to application or to the winner´s concert (July 24th, 2003). The composers will supply the music (parts for directing and parts for voices) in time and without charge. Only one work per composer can be entered.

The City of Klagenfurt Composition Prize 2003 is open to entries for solo clarinet and bigband, with electronic input (including live electronics) as an additional option. The solo part can cover the whole range of the clarinet family - that is bass clarinet / B - clarinet / Es - clarinet. It will be interpreted and played by the virtuoso clarinettist Michael Riessler. Performance time approx. 15 to 20 minutes.

The ensemble part will be played by the Nouvelle Cuisine Bigband from Vienna, whose style goes in the direction of performing big band in more ways than just the traditional patterns of playing jazz. Pieces are sought that - within one

composition - facilitate a dialogue between modern improvisation techniques and the art of contemporary composition. At the same time plenty of space is to be given to the solo clarinet, both for improvisation and as composed music.

Finally, from the total pool of the bigband, at least twelve musicians are to be given parts.

Solo: bass clarinet / B - clarinet

Bigband: SAX 1: alto sax / soprano sax / B - clarinet / bass clarinet / flute, SAX 2: alto sax / B - clarinet / bass clarinet, SAX 3: tenor sax / flute, SAX 4: tenor sax / soprano sax. / flute / bass clarinet, SAX 5: baritone sax. / alto sax / B - clarinet / bass clarinet, Four trumpets, also 1 horn (French horn), Two trombones / bass trombone / tuba, Electric guitar, also: acoustic guitar; E - bass, also double bass, Piano, also Korg Triton synthesizer, Drum set, Percussion

Jury: Chairman: Siegfried Palm. Other members of the jury: Rainer Bischof, Christoph Cech, Dieter Glawischnig, Dieter Kaufmann, Michael Riessler. A decision by the jury will be taken on June 14th, 2003.

The City of Klagenfurt will award the following prizes: 1st prize, Euro 3.600,-, 2nd prize Euro 2.900,-, 3rd prize Euro 2.200,-

All entries must be sent in by May 2nd 2003 (date of postmark)

The first performances will take place on July 24th, 2003 in Stift Viktring (Viktring Monastery). The works will be performed by the Nouvelle Cuisine Bigband Vienna, conducted by Christoph Cech. The soloists of the prizes will be Michael Riessler, clarinet. The composers are required to agree to the live recording and later broadcasting by the ORF (Austrian TV and Radio Service).

Musikforum Viktring-Klagenfurt
Stift-Viktring-Straße 2
A-9073 Klagenfurt-Viktring Austria

office@musikforum.at
www.musikforum.at

Call for Works: Prix Ton Bruynèl 2003

The Prix Ton Bruynèl consisting of Euro 5.000 is awarded for an electroacoustical work in the two following categories with a maximum duration of 20 minutes. The Prix is to be used as a commission for a new work which will be premiered during the International Gaudeamus Music Week 2004. The Foundation Ton Bruynèl will only carry the costs of the performance by musicians resident in The Netherlands.

Composers of any age or nationality may submit one electroacoustic work.

Works may be submitted for the following categories: A: works for tape only, B: works for tape and one to eight instruments

Works may already have been performed but they must have been composed not more than five years ago.

The composer of the winning work must provide the performance material. The performance may not result in charges such as travelling costs for the composer, fees for rental or for performance material, fees for performers other than the ones mentioned above, broadcasting companies or a CD production.

The entered works will be kept in the library of the Gaudeamus Foundation. They will only be returned if this is expressly requested and a postal return fee is included.

The composer should send: a biography preferably in English, title, duration and scoring of the work, programme notes, a score and the tape part (preferably on CD), a recording of the complete work, a MIDI version is permitted,

Deadline for entries May 5 2003 (postmark)

Annelie de Man
1e Tuindwarsstraat 3
1015 RT Amsterdam, The Netherlands
tel: +31-20-6386487
fax:+31-20-6386208

rdeman@chello.nl
www.bruynel.nl

Call for Works: 2nd Luigi Nono composition price

for accordion & electronically elaborated sounds

4th Festival of Contemporary Music Luigi Nono.
November 6-9, 2003, Italy

The Festival organizes the second composition's price reserved - in this edition - to a work for accordion (diatonic or chromatic) and electronically elaborated sounds on magnetic tape or DAT. On this support the composers have to add, jointly to the electronic sounds, a literary text of any author, in prose or verses (in original language or translated in Italian). The duration has to be not less than 8 minutes and should not exceed 15 minutes.

The competition is opened to composers from all over the world with no age limit. The candidates have to submit the score, unpublished and not yet played, (in 4 copies) the electronic support (magnetic tape or DAT, in one copy) and the application alleged to the present text to the following address:

Associazione „Musica Libera"
Via Gatteri 29
Trieste (zip code 34129)

before and not after May 31, 2003 (the cancelled postage

stamp will be regarded as prove).

The price for the winner (or winners) - as final decision of the jury - is the amount of Euro 500,00 and the live performance of the work during the fourth edition of the Festival of Contemporary Music „Luigi Nono"

No application fee is due.

Musica Libera
Festival di musica Contemporanea Luigi Nono
Via Gatteri 29
34129 Trieste, Italy
tel: +39-040-361477
fax: +39-040-3385155298

ppzeta@tiscalinet.it
www.musicalibera.it

Call for Works: Russolo competition 2003

25th edition of the International electronic music competition.

The competition is opened to Italian and foreign composers up the age of 35.

Each competitor can take part with one composition per category (2 in total), specifying the chosen category:

a) electronic music for tape alone

b) electronic music with live instruments or voice and tape or live electronics

Each composition must be recorded separately on CD (preferable) or DAT, for a maximum length of 15 minutes for each piece and having a short description.

For section B is requested: 1 CD complete of work, with the tape and the instrumental or vocal part, 1 complete score of the piece.

Participants must pay the inscription fee of 25 Euros

Entries must be postmarked no later than 30th of August 2003. Entry form:
www.radioart.sk/proj/russolo/

The compositions will not be returned and will become part of the archives of the "Russolo - Pratella" Foundation. Moreover the Foundation reserve itself the right to use this material for the public auditions even outside its office residence.

An International Jury will listen and value the works

The Foundation doesn't provide the Competition with money prizes but will publish a CD in 500 copies. In this CD will be inserted the winner pieces of each category, and eventually other pieces pointed out from the Jury. Will be assigned also some honor's mentions (moral prize).

The winner with his piece inserted in the CD will receive 10 copies free. The finalists will have 1copies free. The CD will be sent to Institutes, Research Centers, Radios and specialized magazines.

The prize includes: CD edition; 10 free copies of the CD; Tape performance at: Computer Art Festival, Padua (Italy); Bruit de la neige, Annecy (France); Radio broadcasting at National Slovak Radio.

Jury: G.Franco Maffina, President of "Russolo - Pratella" Foundation, Futuristic Music historian, Michele Biasutti (Italy), Composer, Psychologist, Researcher, University of Padova, Philippe Blanchard (France), Composer, President of "Studio Forum", Annecy, Giuseppe Di Giugno (Italy) Scientific Researcher, Juraj Duris (Slovak), Composer, CECM Director, Sound Engineer EXS, Slovak Radio, Bratislava, Carlo Ferrario (Italy), Composer, Musicologist, Rossana Maggia (Italy), Experimental Researcher, "Russolo - Pratella" Foundation

Fondazione "Russolo - Pratella"
Via Bagaini, 6
21100 Varese, Italy
tel: +39-0332.237.245
fax: +39-0332.280.331

michele.biasutti@unipd.it
www.radioart.sk/proj/russolo

Call for Works: 4th International Competition of Computer Music Composition „Pierre Schaeffer"

The competition aims to promote compositional activity in the specific sector of music that uses an auxiliary Electroacoustic means, creating at the same time a meeting point in the complex and multi-faceted world of electronic music. Towards the end the utmost diffusion will be given to the winning works, across both CD audio support and public concerts.

The competition, with no age limits, is divided into two categories:

category a) - solo tape;

category b) - tape and instrument/s;

No more than 1 composition may be presented in each category (max. two pieces)

Maximum duration per piece: 10 minutes.

The works have to be sent to the Accademia before 31 August 2003

category a) a recording of the complete piece on CD audio;

category b) a recording of the complete piece on CD audio; a recording of only the electronic part on the same CD, by indicating the ID of identification on the case; a complete copy of the score (A4 sheet);

Three prizes and a special mention will be awarded for each

category. The winning works will be recorded on a not commercial CD audio. The best pieces will be performed in concert at the Auditorium of the Accademia Musicale Pescarese.

Each prize winner will be sent 15 complimentary copy of the CD and the relative diploma. The finalists to whom will be not awarded a prize will receive a diploma of participation.

None of the material sent will be returned; it will be catalogued and integrated in the tape library of the Accademia Musicale Pescarese, which reserves the right to make use of it for public or didactic audition, in it´s own seats or elsewhere.

The jury will be made up of eminent composers and figures from the world of Computer Music.

Artistic Director of the Competition: M. Riccardo Santoboni, Secretary of the Competition: Prof. Anna Rita Ticari

www.suonovirtuale.com
r.santoboni@mclink.it

Call for Works: Seoul International Computer Music Festival 2003

Submission: Deadline June 20, 2003 (postmarked)

SICMF 2003 will be held in November, 2002 in Seoul, Korea.

A call for electro-acoustic music works that fit into the following categories:

1. tape music

2. electro-acoustic music with instruments (up to 8 players)

3. live electro-acoustic music

4. audio-visual media (VHS, SVHS, NTSC, or DVD format)

All compositions have to be realized after 2001 and should be less than 10 minutes long.

Audio-visual submissions should be less than 6 minutes in duration.

All compositions except audio-visual works should be submitted via CD, DAT, ADAT or DA-88 format.

Scores should accompany pieces that require performers. The number of performers is limited to 8 persons. For performances requiring specific traditional instruments, composers are responsible for providing performers on location.

Channels for audio playback is limited to 4 channels. ADAT and DA-88 will be provided.

Detailed information regarding live electro-acoustic music pieces such as equipment, hardware, software, etc. should be included with submission.

Composers must attach a short biography and program note for their composition, each of at most 150 words.

Please send your submissions to;

Donoung Lee, president
Korean Electro-Acoustic Music Society
The College of Music, Hanyang University
17 Haengdang-dong, Seongdong-Gu
Seoul, KOREA 133-791

For further information please email us at
master@keams.org

or visit our web page
www.keams.org

Call for Works: Bourges 2003

30th International Competition of Electroacoustic Music and Sonic Art
www.imeb.net
/english/2003/concours/sommaire.html

1. The Competition is opened to French or foreign entrants; composers, sound artists or performers.

2. Entrant must fill out and sign the registration forms A and B for each work submitted. These registration forms can be downloaded from IMEB's web site. If you have any difficulties, please call us for a printed version.

3. The entrant's work and duly filled registration forms, must be sent prior to Mai 7th, 2003 to the following address:

SCP Christine Jacquet, bailiff
1 rue Coursalon
18000 Bourges
France

4. The entrant must choose one of the three sections he or she wants to enter. In the chosen section, the entrant may enter several works. In Section II, the entrant can compete in several categories, however a work already entered in one category will not be accepted in another one.

5. Sections of competition.

To compete the entrant must choose among the three following sections:

SECTION I : RESIDENCE

Section I is opened to all entrants, composers, sound artist or performers, between 18 and 25 years old or regardless of age if the entrant is a student.
Entry is anonymous and individual.

The section's objective is to contribute, by mean of rewards, to young laureates training, travelling and confrontation/discovery of new techniques and aesthetics in different cultural environments and under new horizons.

SECTION II : TRIVIUM A and B

Section II is opened to all entrants, composers, sound artists or performers, 26 years old and older.

Section II is made up of Trivium A and Trivium B; each Trivium contains 3 categories (i.e. 6 categories):

Trivium A is dedicated to "concert" works and broadcast:

1st Category: electroacoustic music in studio without instrument

2nd Category: electroacoustic music in studio with instruments

3rd Category: sonic electroacoustic art works

Trivium B is dedicated to multimedia and shows works, interdisciplinary works that creates direct or interactive relations with other artistic expressions:

4th Category: work for dance or theatre

5th Category: work for installation or environment

6th Category: work for multimedia (video, video-dance, CD-ROM)

The entrant is required, compulsorily, to register his or her work in one of the 6 categories.
Entry is compulsorily anonymous for categories 1,2, 3.
Entry may be individual or collective.

The objective for this section is to support work creation, to promote composers and sonic artists, to valorise their works, and to develop their career.

SECTION III : MAGISTERIUM

Section III is opened to entrants having at least 25 years of professional experience in the field of electroacoustic music.

Entry is non-anonymous. It may be individual or proposed by professional institutions.

It should be stressed that the Jury will base their decisions only on works entered in the competition and not on the entirety of the composer's work.

The objective for this section is the promotion of established entrants and the diffusion of works that might become milestones in the history of electroacoustic music evolution.

For all questions or requirements, contact IMEB by email

administration@ime-bourges.org
by fax (+ 33 (0)2 48 20 45 51)
or by phone (+ 33 0(2) 20 41 87).

Call for Works: Open Work Bourges

www.imeb.net

Calling on the international community of electroacoustic music and sonic art for a Work Overture Project programmed in the 33rd FESTIVAL SYNTHESE BOURGES 2003

In the framework of the 33rd Festival „Synthese" 2003, all electroacoustic music composers, sound creators and sound sculptors are invited to create a 4 to 6 minutes specific work, on a theme.

This year the proposed theme is „the mother, the father". According to your preference you can treat the theme of the mother, or of the father, or of both. The composers who participate to the work overture 2003 are free to choose their own style and aesthetic approach if they propose an electroacoustic music or a new sonic art that the theme inspired them. They can also propose a visual work in the form of a video product (standard VHS, mini DV or DVD).

The works received will be programed every day during the 33rd Festival „Synthese" in a series of concerts within the framework of the „Salon Musical".

The conditions of participation are as followed :

1. The work overture project is opened to all composers, creators and sonic sculptors who wish to participate.

2. All works has to be finished before the end of May 2003. Works have to be on this theme only, otherwise they will not be broadcast.

3. The duration of your work must span not less than 4 and not more than 6 minutes.

4. Your work must be exempt from all broadcasts and reproduction rights, excepted of course author's royalties.

5. Your must send your work using one of the following media: CD, Dat, or MD, on VHS, mini DV, or DVD if it is a multimedia work.

6. Your work will be kept at the IMEB's International Sound Library.

To take part in the work overture project you must accept all the conditions in the agreement.

Please let us know of your decision and send us the information on your work title and duration before March 03, 2003.

The participants list will be published on the IMEB's site at the end of March.

Please send us your presentation, biography and photo before April 30, 2003. All information sent to us will be published in the Festival program at www.imeb.fr

Please send us your work between April 30, 2003 and May 15, 2003.

For all information, please contact :

IMEB
Place André Malraux – BP 39
18001 Bourges (France)
Tél. + 33 (0)2 48 20 41 87
Fax + 33 (0)2 48 20 45 51

administration@ime-bourges.org

www.imeb.net

Call for Works: Weltmusiktage 2004 Schweiz

The 2004 ISCM World New Music Days will be held in Switzerland from 3 to 12 November 2004.

At one time the ISCM World Music Days were the only real opportunity for an exchange of new music at an international level. In today's globalised, interlinked world the basic ideas of the festival need to be re-examined and new solutions found for the achievement of its aims. As both a country founded on coexistence and exchange among four different linguistic regions, and as a classic tourist and transit region, Switzerland offers a nigh-to ideal venue for an artistic re-evaluation of the idea of exchange. The title of the festival, "Trans-it", stands for a decentralised conception which focuses on travelling from place to place, on travelling together in a "sound train". But the festival's decentralised aspect will be reflected not only in its form, but also in the inner logic of the activities included in the festival.

"Trans-it": The festival's title is ambiguous by intention. It can and it should be interpreted in various ways and therefore is by no means limiting. On the contrary: within the scores and concert programmes it should appear in abundant and emphasising manners.

The festival's subject is not "Transit" but "Trans-it". The prefix "Trans" (or even "Trance"?) can be combined in many ways. It therefore provides a huge potential to react artistically on it. The "it" – linked by a hyphen – stands for something indefinite, something open...

For further information on the festival's subject please check the website:

www.wnmd2004.ch

We would like the World New Music Days 2004 to be more than a mere platform for new works from all over the world.

We therefore expect:

a) Every submission to be accompanied by an explanation of the connection between the programme and the festival theme, "Trans-it"

b) Applicants are also invited to make programming suggestions (for example, as to type of performing venue, but also ideas for meaningful complements to/confrontations with their own work) and suggestions for new ways of bringing music to audiences.

Proposals for large projects capable of being developed in cooperation with member countries are equally welcome. These projects may exceed the scope of a regular concert.

An international jury will consider the submissions and recommend their choice of projects to the Artistic Director of the festival. The Artistic Director will plan the programmes in cooperation with the performers and the local organisers. We look forward to receiving interesting, colourful proposals presenting contemporary music in a new, meaningful and exciting context.

Entries

Entries and Score Selection

Submitted works (with the exception of multimedia projects) should not exceed 15 minutes in duration, so as to enable us to present at least one work from each member or associate member country and provide a truly global survey of world creativity.

The programme for the ISCM World New Music Days - Switzerland 2004 will be arranged in accordance with the following procedures:

a. Preliminary short-listing of potential works by musical category will be carried out by the WNMD 2004 Artistic Committee.

b. An international jury of distinguished musicians will select and propose works to be performed at the festival (taking elucidations and programme proposals into account during the decision-making process). The works and projects that secure a majority of votes will constitute the official selection.

c. The final programme is the responsibility of the Artistic Director, in cooperation with the international jury and the festival organisers.

Procedures

Procedures for Submitting Entries

1. Each National Section and Associate Member of the ISCM may submit up to six works from at last two different categories as an offical submission.

2. Individual composers, including those from countries not affiliated with the ISCM, may submit only one work. An entry fee of Euro 50 (fifty euros) must be paid by credit card, international money order/mandat de poste internationale or bank transfer, payable to "ISCM World New Music Days 2004". For those wishing to pay by bank cheque, there is an additional fee of Euro 25 (twenty-five euros). If the entry fee for a submission does not reach the ISCM by the advertised deadline, the submission will be disqualified.

3. Publishers may submit works only if accompanied by a letter of consent from the composer.

4. Only one submission per composer can be accepted, whether as a result of national selection or individual submission. Preference will be given to official submissions.

5. Equal attention will be given to all categories of music:

a. Orchestra, chamber orchestra and chamber string orchestra (with or without soloist(s); without organ)

b. Symphonic wind orchestra

c. Chamber groups (with or without soloist(s))

d. Chamber music (1-9 players)

e. Choral music (Children's choir/women's choir/men's choir/mixed choir)

f. Electronic and computer music (without or with (one to four) acoustic instruments; speaker system with no more than 4 channels)

g. Cross-media projects (with or without theatrical or multimedia elements)

6. All submissions must be accompanied by the following material:

a. Short biography in English of the composer (approximately 200 words)

b. Statement and proof of his/her nationality

c. Mailing address and e-mail address (preferred if available) of the composer (website of the composer or link to the publisher)

d. A recording of the work (if not available, a midi version is strongly recommended) (cassette tape, MD and CD are accepted for audition purposes)

e. Programme notes in English for the submitted work (approximately 200 words)

f. Year of composition and an accurate estimate of the duration of the work

g. All information/documentation relevant to the judging by the international jury (especially for category f: a recording, score, outline of the total system, list of equipment, etc.)

h. For submissions by individual composers or publishers, proof of payment of the entry fee

i. A recent photo of the composer

j. Short elucidations of the connection of the programme to the festival theme, "Trans-it", for every work and all programme proposals (see page 2)

7. EXTENDED DEADLINE: 28 FEBRUARY 2003 !!!!!!!

8. All materials should be sent by air-mail to the following address:

WNMD2004
Post Box 8074
CH-8036 Zurich, Switzerland

9. Submission of an entry to the festival constitutes tacit agreement that the composer or publisher will provide all necessary performing material (including scores and parts; special or uncommon instrument(s);tapes, etc.), should the work be selected for performance.

10. Although all entries will be treated with great care, the ISCM and the organisers disclaim responsibility for the loss or damage of scores, tapes or any other submitted material.

11. Submitted material will be returned only if expressly requested and the cost of postage or freight has been prepaid. On special request, delegates of the National Sections and Associate Members may collect submitted material from their countries at the 2004 General Assembly.

12. Submissions that do not meet the above-mentioned conditions or deadline will not be considered.

Call for Works: Stockhausen Composition Contest

`www.acidplanet.com/contests/stockhausen`

Dave Hollinden and ACIDplanet, in collaboration with Karlheinz Stockhausen, present this contest under the guidance of Professor Stockhausen, who has provided sound samples, a formula consisting of his work Sagittarius, and a set of instructions. Entrants can download the necessary materials, complete their composition, and upload it onto the ACIDplanet web site. Professor Stockhausen himself will select the winning composition.

Professor Stockhausen has developed an approach to creating music which he calls „formula composition". For this contest at ACIDplanet, he has provided Sagittarius from his Tierkreis (Zodiac) as the formula, along with 12 sound samples and instructions. Following his instructions, excerpts from the sound samples are to be transposed onto the pitches of the formula after it has been stretched in time by a factor of eight. Inside the time span of this stretched version of the formula, various other versions of the formula can be juxtaposed and superimposed.

- The contest begins Wednesday, December 11, 2002.
- All entries must be fully uploaded by midnight CST on Sunday, May 25, 2003.
- This contest is open to citizens of all countries.
- Entrants must be at least 13 years of age.
- Entrants must provide a Windows Media format version of their entry.
- Entrants must provide accurate contact information for the purpose of contacting winners.
- See the Official Rules for full details:

`www.acidplanet.com /contests/stockhausen/rules.asp`

Call for Participation: The Transport Project

`www.cs.bath.ac.uk/~jpff/traffic.html`

Following the successful Door Project and the follow-up Money Project I am proposing that for 2003 the community again take the challenge, using a sample recorded during

ICMC 2002 in Goteborg. The sounds come from the city trams, and other traffic noise.

The challenge is, based on this WAV sample `www.cs.bath.ac.uk/~jpff/traffic.wav` and the task is to create a musical work. The rules are a little more complex this year, in an attempt to save all the last minute hassles.

- Absolute maximum of 4 mins duration, preferable shorter, as it will allow more pieces to be played;
- The sample or part of the sample must be the only source material;
- Submission must be by CD, DAT or a data file in either WAV or AIFF format. An ftp site will be available on request
- Submissions must include

  Short program notes

  Technical information on hardware/software/methodology used

  Short composer bio

  Each of these should be less that 100 words.
- Composers must state whether they are willing to have their work on Project CD, or not. This will have no influence on the decsions, but will make my life easier if we make a CD again. The default is that it can be published on a CD.
- Composers are encouraged to provide e-mail addresses so works can be acknowledged, and any queries dealt with rapidly.
- The closing date is 1 August 2003, but earlier submissions would be much appreciated. Late submssions may be accepted entirely at my discression
- Composers will be notified by 1 September 2003 of the results, hopefully so any necessary travel can be arranged
- It is not a requirement that composers be present at ICMC2003, but I hope to arrange a concert there either on or off ICMC, and participation is encouraged.
- Judging is by a small listening panel, and any useful feedback from the panel will be available to composers
- The web page will be updated to show progress
- Schools, Colleges and Conservatories are encouraged to use the project in their teaching, and to submit student pieces.

Please address any questions to
`jpff at cs.bath.ac.uk`

Call for Works: Aether Fest: Festival of International Radio Art

Artists and producers of all ages, nationalities and disciplines are invited to submit recorded works of experimental radio art (and visual art on the theme of radio) for possible inclusion in this juried broadcast festival / gallery exhibit. We seek work that challenges what radio is and does and explores what it might be and could do. Radio Art is here defined as a work made specifically for radio broadcast, with the intention of expanding the creative and aesthetic possibilities of the medium. Such works may or may not employ elements of other established genres such as radio theater, spoken word, performance art, hörspiel, text-sound or sound poetry, electroacoustic music, soundscapes, documentary, talk show ... They might be about radio, subverting or exploiting the conventions and expectations of the medium; or, they might make use of the radio apparatus itself as instrument or content. Aether Fest will be broadcast on radio station KUNM 89.9 FM, located at the University of New Mexico in Albuquerque, New Mexico, each Sunday night in June, from 8:30 - 11:30. There will also be a concurrent exhibit of visual art related to the theme of radio (broadcasting, transmission, aether, communication, airwaves, disembodied voices ...) held throughout June at the Harwood Art Center in Albuquerque; this will be juried by the HAC's Visual Arts Committee. Artists may submit both audio and visual work, and are encouraged to do so if they work in both media. Cash awards of $300 US will be given to each of three outstanding audio works selected by the jury.

There are three general categories for submissions: 1) recent work (made since 1998); 2) older work; and 3) shorts (complete, unedited pieces of 5 minutes or less). We prefer individual works that are 25 minutes or less, the contents of which must be completely original, but longer works will be considered (for long pieces, we suggest that you also include an edited version as an alternate choice). Media for submissions: CD, CD-R or DAT is preferred, but cassettes will also be accepted if the artist does not have access to digital recording media. Send 3 copies of each work submitted (you may include more than one work per CD / tape; please use index points on CD or DAT, or clear silences separating pieces on cassette). Please include biographical information, credits for all participants, and anything else you want us to know about the work (3 copies). It is a good idea to mention what qualifies the work as radio art if that is not obvious. For works in which text plays a major role, at least half of the text should be in English (we are flexible about this); however, works in other languages will be considered, especially if an understanding of the text is not crucial to the appreciation of the piece. Works without any spoken text are also acceptable.

Deadline: April 1. Send audio and visual submissions by mail:

Aether Fest
c / o Nonsequitur
P.O. Box 344
Albuquerque, New Mexico 87103, USA

For more information, contact Steve Peters by email:

nonseq@swcp.com
www.kunm.org

Call for Works: Works for horn (maybe with other instruments) and tape

Trinity Chamber Concerts of Berkeley, CA, in conjunction with French horn player Richard Burdick, is searching for compositions for horn and tape. The tape part must be prerecorded, not live electronics. Works for solo horn or for horn with any combination of cello, piano, strings (the Burdick Ensemble), and tape will also be considered for performance.

Deadline: February 25. More information is availaible by email, web, or mail.

Richard Burdick
1728 Coloma Way
Woodland, California 95695

richburdick@I-ching-music.com
i-ching-music.com

Call for Works: 2003 Hultgren Solo Cello Works Biennial

This is a competition for living composers of any age held every other year. Cellist Craig Hultgren in conjunction with the Birmingham Art Music Alliance, the University of Alabama at Birmingham, Georgia State University, and the University of Alabama will present a full - length concert of competition finalists in Birmingham, Alabama, Atlanta, Georgia and Tuscaloosa, Alabama. Audiences in attendance at the conclusion of the performances will vote to award the $1,000 Birmingham Prize, the $1,000 Atlanta Prize, and the $500 Tuscaloosa Prize. Based upon such criteria as idiomatic craft, forward-looking conception, and innovative cello writing, a review panel will choose a single program of finalists to be presented in each city. New to this Biennial will be a publicly released, live recording on CD of the finalist compositions. The competition is open for solo cello works or works with cello and electronics (no cello and piano pieces nor concertos). Applicants may submit only one, complete work. The works may be for an acoustic instrument, an amplified - acoustic or a purely electronic cello. Cello works with computer sound processing is possible through a Macintosh G4 Powerbook. Submission of recordings are optional but helpful. All scored, solo cello works by composers of any nationality are eligible.

Deadline: May 15. To apply, submit a complete performance score and all materials necessary for performance such as electronic components (DAT, CD or cassette formats are acceptable); a cover letter signed by the composer containing the complete title of the applicant's work, the date the piece was completed, the approximate length of the work, the composer's birth date and the applicant's contact information such as postal address, telephone number and / or email address; a concise paragraph of biographical material about the composer and a concise paragraph of program notes about the composition; and a $7 handling fee (make checks payable to the Birmingham Art Music Alliance in US dollars). Materials should be sent by mail.

Hultgren Solo Cello Works Biennial
Birmingham Art Music Alliance
P.O. Box 11963; Birmingham
Alabama 35202-1963, USA

More information is available by email.

hultgren@mindspring.com

Call for works and papers: New Forms Festival

The New Forms Festival is an annual festival of digital arts and technology, including: digital art, music and film, performance, installation, immersive environments, and conference. It covers four days of performances, panel discussions, workshops, and interactive galleries on contemporary media arts issues. In its third year, The New Forms Festival 2003 will be held in Vancouver, British Columbia, Thursday July 24 - Sunday 27. The theme for 2003 is „inter[se/ac]tion", a response to the technological and artistic convergence that have been occurring in the fields of arts, science and new media in recent years. Works selected will fall into the following categories: alternatives in narrative, digital cinema and video; post-digital and electronic sound art and music; net art; performance art, installation and technologies; immersive and online environments; electronic gaming art; 3-D animation; artificial reality art and installation; and sensor technologies and telematics. Works with collaborative and improvisational components or live artworks, created for the festival are welcome. The festival also encourages artworks that are process-oriented, continually evolving and in transformation, which are facilitated through technological and ideological means.

Deadline: February 15. Proposal description, no longer than 500 words, should include: a description of conceptual content and technical issues; a brief description of your activities or an artist biography, with documentation and a port-

folio of your previous projects; a detailed CV or CVs (note that the CVs are not counted as part of the 500 word limit); a brief description of your project and its implementation; a brief description of the people or partners involved in your project/paper; a time schedule: description of the work that has to be done and whether it can be done on site or will be done ahead of time; equipment list, including production materials and supplies needed; a description of technical and organizational assistance needed;and a list of production materials and supplies needed; accompanying collaborators (technician, programmer, performer); documentation (video or audio recording). All proposals must be written in English. Please include an example of past works, such as: one VHS video tape, one audio tape, 10 slides or photographs, or one CD-ROM or DVD-ROM (for PC), or a URL (specify which aspect to examine). Don't send more than two items. Include the title of the work, the author, the applicant's role, the medium, the format, the length, the completion date, and a brief explanation of the content with your support material. Proposals that do not include support material are automatically rejected. Send submissions by mail or email.

Camille Baker, Conference Director / Lead Curator
New Forms Media Society, New Forms Festival 2003
#1202- 207 West Hastings Street
Vancouver, BC V6B 1H7, Canada

`camib@telus.net`

More information is available on the web:
`www.newformsfestival.com`

Call for Works: Scarborough Electroacoustics 2003

SEA03 takes place from July 4th - 6th 2003, hosted by the Creative Music Technology department at the University of Hull's Scarborough Campus. The conference's aim is to explore electroacoustic music through interdiscplinary, practical, and aesthetic concerns. We hope to bring together performers, composers, and musicologists for three days of debate, performance, discussion, and demonstrations, with the central theme being the performance and presentation of electroacoustic music.

The SEA03 conference committee invites proposals for papers and performances relating to this theme. Proposals which address the following areas are particularly welcomed:

- Techniques and issues of sound diffusion (acousmonium configurations, concert/gallery presentation, etc.)
- The use of live electronics, especially with regards to issues of interactivity and the use of alternative control surfaces/systems .
- Electroacoustics in the context of cross-art collaboration (video, dance, theatre, installation, etc.)

Papers and presentations

Papers addressing the topics listed above are invited, although technical demonstrations and reports are also welcome. Proposals for individual papers should be no more than 250 words in length, and papers should last no more than 20 minutes. Proposals should be submitted by email to

`sea03@hull.ac.uk`

(as a Word attachment or email text). Any technical requirements should also be specified.

Performances

The organisers of SEA03 would welcome works across a variety of mediums, including tape pieces, performer/tape pieces, tape/video pieces, pieces involving use of live electronics, and installations. Works in the following formats are acceptable: DAT, CD, DVD, ADAT, video playback DVD, mini DV, SVHS, VHS and Beta SP. Conference facilities will be equipped with two complete sound diffusion systems, a MAX/MSP system, an I-Cube system, a soundbeam kit (4 beams), and video projectors.

Pieces can be submitted on any of the formats indicated above, and should be accompanied by a score (if applicable), a programme note of not more than 200 words, and details of full technical requirements (including diagrams and photographs if necessary). Submissions should be sent via snail mail to:

Dr. Tim Howle
Creative Music Technology
University of Hull
Scarborough Campus
Filey Road
Scarborough
YO11 3AZ UK

If you wish any scores/tapes to be returned please include a stamped addressed envelope, otherwise we regret that materials cannot be returned.

Deadline for proposals: February 21st 2003

Notification of acceptance of pieces/papers: March 21st 2003

Proposals will be considered by a panel including: Tim Howle (University of Hull), Pete Stollery (University of Aberdeen), and Leigh Landy (DeMontfort University).

Visit the conference website at:
`www.hull.ac.uk/cmt/sea03`

Call for Contributions: Conference Electroacoustic Musics

A century of innovation involving sound and technology Resources, Discourse, Analytical Tools

Part of Résonances 2003, an international meeting concerning music and technology organised by Ircam – Pompidou Centre, this conference is organised in collaboration with De Montfort (UK) and the Sorbonne (F) universities et de la Sorbonne, INA/GRM, the Musée de la Musique (Paris) and the Electronic Music Foundation.

Dates/Venue: 15 – 17 October 2003, Petite Salle – Pompidou Centre, Paris

Inspired by the EARS project (ElectroAcoustic Resource Site, MTI Research Group, De Montfort University) and initiated by the MTI and the MINT group of the Université de Paris – Sorbonne, this conference is co-ordinated by an international team of organisations reflecting the level of its ambition: to bring together reflections concerning the better understanding of electroacoustic music and to make relevant initiatives more widely available – from this music's genesis, its appearance and its development spanning a century. The organisers are all engaged in the key areas of debate and are equally actively seeking the development of solutions.

The conference presentations will be offered in either English or French. Simultaneous translation in both directions has been planned.

Programme

From the advent of the first electric instruments, the phonograph, radio, telephone, followed by later electronic and digital inventions, the approaches to technologies relevant to the art of sound have only been limited by the imagination of the musician. Throughout the duration of the century, it could be suggested that the study of music involving these technologies has been increasing. However the investigation of such a varied musical repertoire raises a number of issues that this conference proposes to examine.

During three days, the conference will debate questions concerning resources, discourse and analytical tools.

Paper Presentation

Proposals should be sent in the form of an extended abstract/résumé (of at least two pages length) accompanied by a detailed CV which is to include the author's publication list. The résumé should be ready for publication as it will be used for conference announcements and its programme if the proposal is accepted. Papers presentations are to last 30 minutes (excluding discussions). They may take place in English or French as simultaneous translation has been planned.

The following equipment will be provided: video projector (for portable computers), overhead projector, CD player and sound system.

A programme will be distributed amongst the participants. A selection of the papers will be published in "Organised Sound" (Cambridge University Press), Vol. 9/1 in April 2004.

Posters

Potential conference participants are also be offered the possibility to propose poster sessions which will be presented in the Hall at IRCAM. Please send your proposals according to the calendar for the papers below.

Calendar

• Deadline for the receipt of proposals (paper/poster résumés and CVs including publication lists of the participants): 30 April 2003. These are to be sent, ideally by email to:
`electroacoustique@ircam.fr`

• If your proposal is accepted, you will be requested to send a brief 15-line biography for the conference programme

• Deadline for the receipt of completed texts for the proceedings publication on the website of Résonances: 14 November 2003. Certain proposals for which there may be no space during the conference will be able to be published on this site. A paper-based publication containing all texts in the proceedings and other selected texts, all in their original language, is currently under investigation.

Conference postal address:
Résonances 2003
c/o Suzanne Berthy
IRCAM
1, place Igor Stravinsky
75004 Paris, France

Résonances website:
`resonances2003.ircam.fr`

Call for Works: Edge Radio

Edge is a radioshow for experimental music. It's broadcasted by OOG Radio, Groningen, The Netherlands, everyday Tuesday 23:00-01.00

The first Edge aired September 17, 2002.

Edge, broadcasted from the OOG Studio's, located in Groningen, focuses on experimental music and art-radio. Keywords: classical/electronic/acousmatic music, improv, microsound, noise, acoustic ecology, musique concrète. Artists like Francis Dhomont, John Zorn, John Oswald, Negativland, Radian, Fennesz, Eric Dolphy, Frank Zappa, Karlheinz Stockhausen, Merzbow, Eliane Radigue, Fennesz, Autechre and Luciano Berio were featured in our past editions.

To make the program as exciting as possible Edge is inte-

rested in contributions from artists, composers and labels worldwide, working in the experimental music field.

If you think Edge can be of use for you, please send your material to:

Edge, radioshow for experimental music
Radijsstraat 51a
9741 BL
Groningen, The Netherlands

Call for Submissions: Phonography CD

Phonography announces their upcoming CD, which will focus on field recording. This release, to be produced on CD-R, will perhaps also expand upon presenting the various kinds of 'straight-up' non-open air microphone recordings. Please send field recordings (open air mics, contact mics, hydrophones, geophones, various kinds of radio or satellite transmissions ...), no longer than seven minutes in length. Please do not send composed, 'post-capture processed', or overly manipulated recordings. Minor editing, EQ, and fades are ok. First priority is given to participants on the Phonography discussion forum or web site.

Deadline: March 1. Formats can include CD-R, Minidisc, or DAT, preferably in .wav, .aiff, or other similar file formats. More info is available by email to Dale Lloyd.
`DKL37@juno.com`

Phonography discussion forum:
`groups.yahoo.com/group/phonography`

Send submissions by mail:

Dale Lloyd
800 Jefferson #1512
Seattle, Washington, 98104

More information is available on the web:
`www.phonography.org`

Call for Papers: IX Brazilian Symposium on Computer Music

The Ninth Brazilian Symposium on Computer Music will be held in Campinas, at the University of Campinas UNICAMP, from 06 August to 08 August, 2003. There will be key-note speeches by renowned researchers, paper sections, music papers, tutorials and demonstrations. Researchers, musicians, educators, manufacturers and all concerned with the interplay between music and technology, are invited to submit work. Symposium Theme: Music As Emergent Behaviour

We welcome works investigating the potential of evolutionary computing for musicology and composition, in addition to a wide range of topics of interest

- 13/3/2003 - closing date for submission of works (research paper, discussion paper and music paper)

- 8/5/2003 - notification of acceptance of works

- 29/5/2003 - closing date for submitting the final version of the works

Coordinators: Dr Jônatas Manzolli, jonatas@nics.unicamp.br (IX. SBCM Chair), UNICAMP (NICS & IA), Dr Eduardo Reck Miranda, miranda@csl.sony.fr (Papers Chair), Sony Computer Science Lab Paris, Dr Geber Ramalho, glr@cin.ufpe.br (Papers Chair), Universidade Federal de Pernambuco (UFPE), Dr Fernando Iazzeta, iazzetta@usp.br (Music Paper Chair), Universidade de São Paulo (USP)

Submission Categories

- Research papers: These papers should report concluded scientific and/or technical research results or systems. They must be written in English and should not exceed 8 pages.

- Discussion papers: These papers will discuss ongoing research work. They may be written in Portuguese, Spanish or English and should not exceed 6 pages.

- Music papers: A music paper is a composition accompanied by a report of computer techniques and materials involved in the compositional process. They may be written in Portuguese, Spanish or English and should not exceed 6 pages.

`jonatas@nics.unicamp.br`
`www.ic.unicamp.br/sbc2003/`

Call for Papers: Miso Music Portugal

The Miso Music Portugal calls for papers about Relations between Music and Science to be presented at the Music and Science Symposium at the Música Viva International Festival on the 12th and 13th of April 2003 Coimbra - Portugal. Deadline for entries 31/01/2003.

Miso Music Portugal
Rua do Douro 92, Rebelva
2775-318 Parede, Portugal
tel+351.21.4575068
fax+351.21.4587256
`misomusic@misomusic.com`
`www.misomusic.com`

Call for Submissions: 6th International Workshop in Digital Audio Effects, DAFx03

September 8 to 12, 2003
`www.elec.qmul.ac.uk/dafx03`

The 6th International Conference on Digital Audio Effects, DAFx-03, will be held at Queen Mary, University of London, organised by the Digital Music Laboratory of the Department of Electronic Engineering.

DAFx grew from a very successful COST action in Europe

and has established a reputation for the excellence of the papers and its open, friendly atmosphere. It's an event where everyone is involved in some aspect of music and information technology, from new ways to play electronic instruments to music information retrieval.

DAFx appeals to researchers and practitioners in digital audio and digital music processing with poster and spoken presentation sessions over 3 days.

Topics include:

- Compositional uses and issues
- Performance and gesture control
- Filtering and Modulation
- Delays and Spatialisation
- Time-frequency & Spectral Processing
- Audio Coding & Sound Modeling
- Perceptual Issues and Psychoacoustics
- Software and Hardware Implementations
- Music Information Retrieval systems
- Automatic Transcription and High-level features
- Audio analysis and low-level features
- Auditory Displays and installations
- Source Separation
- Audio Restoration
- Internet Audio and Internet Acoustics
- Audio for Multimedia

Queen Mary is about 15 minutes east of Central London. It is a multi-faculty university on a campus site bordered by Regents Canal and close to Docklands.

For information about registration, travel, accommodation etc. see the general information page:

`www.elec.qmul.ac.uk/dafx03.`

For information on DAFx, including DAFx98 to DAFx02, start browsing at:

`www.dafx.de`

Extended Abstract Submission (2 pages): 11 April 2003

Notification of Acceptance: 20 June 2003

Final Paper Submission: 25 July 2003

Call for Submissions: WEDELMUSIC 2003

3rd International Conference on Web Delivering of Music

15th - 17th September 2003

`www.wedelmusic.org`

`wdm03@leeds.ac.uk`
`wedelmusic@dsi.unifi.it`

Co-located with MUSICNETWORK Open Workshop 2003

17th-18 September 2003

`www.interactivemusicnetwork.org`

`musicnetwork@dsi.unifi.it`

Both at the:

University of Leeds Interdisciplinary Centre for Scientific Research in Music (ICSRiM), School of Music Leeds LS2 9JT, UK
`www.ICSRiM.org.uk`

Paper submission: 28 Feb 2003

Notification of acceptance: 30 Apr 2003

Camera ready version: 30 May 2003

ALL submissions and proposals should be written in English and submitted in PDF format via email to
`wdm03@leeds.ac.uk`

by 28th Feb 2003.

WEDELMUSIC-2003 aims to explore these major topics in music-related fields, to address novel approaches for distributing music to larger audiences, providing wider access and encouraging broader participation. Legal aspects and the impact of these developments on cultural heritage will be considered, together with their availability to people with limited access to classical archives and libraries. In particular, proposals and solutions benefiting visually-impaired people are encouraged, to let everybody access this large and hidden cultural heritage. Tools for disabled people will contribute to broadening their music playing and enjoyment.

The conference focuses on both the challenges posed by the Internet in its role as a major player for business changes and music distribution, as well as opportunities as a new infrastructure for enabling technology. In addition, this conference seeks to promote discussion and interaction between researchers, practitioners, developers and users of tools, technology transfer experts, and project managers. Of particular interest is the exchange of concepts, prototypes, research ideas, and other results which could both contribute to the academic arena and also benefit business and the industrial community. WEDELMUSIC-2003 will bring together a variety of participants to address not only different technical issues, but also the impact of Internet on the preservation of cultural heritage.

Topics of interest include, but are not restricted to, the following aspects:

- Protection formats and tools for music
- Transaction models for delivering music
- Business models for publishers
- Legal aspects
- Copyright ownership protection
- Watermarking techniques for various media types
- Formats and models for distribution

- High quality Audio Coding
- Music manipulation and analysis
- Music and tools for impaired people - Braille
- Publishers and distributors servers
- Multimedia streaming and delivery
- MPEG-7 and MPEG-21
- Viewing and listening tools for music
- Music editing and manipulation
- Music education techniques
- Databases for institutions: publishers, libraries, theatres, etc.
- Content based retrieval
- Conversion aspects, techniques and tools
- Music imaging, music sheet digitalisation, techniques and tools
- Music and pervasive computing
- Music transcoding
- Music and cultural heritage valorisation

Research Papers

Papers should describe original and significant work in the research and practice of the main topics listed above. Research case studies, applications and experiments are particularly welcome. Papers should be limited to approx. 2000-5000 words (8 pages) in length. Of the accepted paper, 8 pages will be published in the conference proceedings.

Short Papers/Posters

Shorter research papers on work-in-progress, interim results, advanced topic position paper and current research initiatives are also welcome. Submissions should be limited to approx. 2000 words (4 pages) in length. Of the accepted paper, 4 pages will be published in the conference proceedings.

Applications and Industrial Papers

Proposals for presentations of Applications and Tools are also welcome. These may consist of experience reports from actual utilisation of tools, industrial practice and models, or tool demonstrations. Application proposals will be reviewed based on their description and demo (if appropriate). A one-page summary of the accepted proposal will be published in the conference proceedings.

AECME: Association of Professors of Composition of Electroacoustic Music

The AECME: Association of Professors of Composition of Electroacoustic Music, was founded in October 2002, at the 'Journées de l'Electroacoustique' at the CSNMD in Lyon, France. Its goal is to connect professors in this field, to promote the field, and to organise exchanges between academics in the field. The executive board voted the following executives: Christian Eloy (Chairman), Roger Cochini (Vice Chairman), Michel Pascal (Administrative Assistant) and Pascal Gobin (Treasurer). The AECME intends to significantly represent the teaching of Composition of Electroacoustic Music to the government and public institutions in France, and hence we are calling to professors and teachers of this discipline to contact the AECME. For more information, contact Christian Eloy by email, or look at the organization's website.

`christian.eloy@wanadoo.fr`
`perso.wanadoo.fr/christian.eloy/aecma.htm`

Call for Papers: Organized Sound: Performing with Technology

Organised Sound: An International Journal of Music and Technology, Volume 8, Number 3 (December 2003), 'Performing with Technology'. We invite submissions from composers, performers and researchers working in the realm of digital performance. Submissions related to the theme are encouraged, but those that fall outside the scope of this theme will also receive consideration. Suggested topics for exploration include: aesthetics of performing with technology, interactive performance systems, virtuosic / naive techniques, digitally-enhanced acoustic instruments, notation / dynamic score, distributed group performance, installation performance, intermedia / collaborative performance, dance / body as instrument, alternative sound reproduction paradigms, diffusion / spatialisation, composer's studio as instrument, laptop music / live remix / improvisation, autonomous performance / A.I., or environment / presentation.

Deadline for submissions is June 1. Submissions may consist of papers, with optional supporting short compositions or excerpts, and/or audio-visual documentation of performances. Supporting audio and audio-visual material will be presented as part of the journal's annual CD-ROM which will appear with issue 8 / 3. Related discussion will be located on the ICMA Array websites, and additional multimedia material at the Cambridge University Press website. Style manual is posted on the inside back cover of published issues of Organised Sound, or on the web.
`uk.cambridge.org/journals/oso/`

Hard copy of articles and other material should be submitted to:

The Editors, Organised Sound
Centre for Technology and the Arts
Clephan Building, De Montfort University, Leicester
LE1 9BH, UK

or by email:

`os@cage.york.ac.uk`

Issue coordinators will be Margaret Schedel, and John P. Young. More information is available by email:

gem@schedel.net
sound@netmuse.org

Call for Papers: Organized Sound: Sound Installation

Organised Sound: An International Journal of Music and Technology, Volume 8, Number 2 (August 2003), 'Sound Installation'.Submissions may consist of papers with optional supporting audio and / or audio-visual material that will be presented as part of the journal's annual CD-ROM (to appear with issue 8 / 2). Additional multimedia material may also be placed on the Cambridge University Press website. We invite submissions that address the creation of works where the primary medium is sound, and where the work addresses, fills, changes and above all, requires space for its execution. Works to be discussed may be designed for physical spaces, be they architectural (public, or civic environments, or specialist environments such as art galleries and museums) or environmental spaces (outdoors, underwater ...), or they may be designed for virtual space (Virtual Reality systems, game consoles, the internet), or conceptual works for imaginary space. Works may be focused upon the demands of the chosen site, as is true for most site-specific works, or take a generic approach to site. They may also be designed to address a public, select, private or non-existent audience.

Submission deadline: March 15. Style manual is posted on the inside back cover of published issues of Organised Sound, or on the web.

uk.cambridge.org/journals/oso/

Hard copy of articles and other material should be submitted to:

The Editors, Organised Sound
Centre for Technology and the Arts
Clephan Building, De Montfort University, Leicester
LE1 9BH, UK

or by email:

os@cage.york.ac.uk

Issue coordinators will be Garth Paine and Leigh Landy. More information is available by email:

gpaine@dmu.ac.uk
llandy@dmu.ac.uk

Call for Papers: Leonardo Music Journal: Composers inside Electronics: Music after David Tudor

For issue 14, 2004. Articles on any aspect of the work of David Tudor (both in its historical context and as it applies to music and art today), on the influence of Tudor's ideas on their own work, or on the role of technological idiosyncrasies in their composition, performance or production. David Tudor articulated a profound shift in the aesthetics of electronic music. Inspired by Tudor (and other composer / luthiers like David Behrman and Gordon Mumma) and aided by the Lego-like modularity of integrated circuits, the experimental music community in the 1970s adopted a new working method based on seat-of-the-pants electronic engineering. The circuit, whether home-made, self-hacked or store-bought but scrutinized-to-death, became the score, as Tudor once said, "In my electronics . . . I try to find out what's there---not to make it do what I want but to release what's there. . . . The object should teach you what it wants to hear."

Deadline: November 1, 2003 (rough proposals, queries); January 1, 2004: submission of completed articles.

The CD for this issue is being curated by Ron Kuivila.

More information is available from Editor-in-Chief, Nicolas Collins by email, or on the web:

ncollins@artic.edu
mitpress.mit.edu/Leonardo/lmj

Call for proposals: Leonardo Book Series

The mission of the Leonardo Book Series, published by the MIT Press, is to publish texts by artists, scientists, researchers and scholars that present innovative discourse on the convergence of art, science and technology. Envisioned as a catalyst for enterprise, research and creative and scholarly experimentation, the book series enables diverse intellectual communities to explore common grounds of expertise. The Leonardo Book Series provides for the contextualization of contemporary practice, ideas and frameworks represented by those working at the intersection of art and science. Book proposals addressing theory, research and practice, education, historical scholarship, discipline summaries, collections, and experimental texts will be considered.

Your proposal should include the following four items:

(1) A prospectus describing your intentions,

(2) A detailed table of contents,

(3) two to four sample chapters that demonstrate the clarity and precision of your prose and the appeal of your expository strategy,

(4) an up-to-date curriculum vita or resume. Inquiries and proposals can be submitted to:

Joel Slayton, Chair
Leonardo Book Series Committee
c/o LEONARDO
425 Market Street, 2nd Floor
San Francisco, CA 94105

More information is available by email and on the web:

leonardobooks@mitpress.mit.edu
mitpress.mit.edu/authors/ms-submission.html

Call for Submissions: Eighteenth International Joint Conference on Artificial Intelligence (IJCAI)

Workshop on methods for automatic music performance and their applications in a public rendering contest

August 11, 2003, Acapulco, Mexico

Rencon (Performance rendering contest for piano) is a yearly international event that just started in 2002. Its goal is to foster research on computational models of and methods for the generation of expressive musical performances. The workshop associated with a musical contest provides a forum for presenting and discussing the latest research in automatic performance rendering and, more generally, computer-based music performance research.

Rendering expressive piano performance in itself involves complex perceptual, cognitive, psychological, and aesthetic processes. It therefore has a broad spectrum and constitutes a challenging research theme for AI. Moreover, music performance is a promising field for investigating basic principles of human emotion, intelligence, creativity and individuality. Rencon is also considered a landmark research project in the sense that its ultimate goal is the development of a performance rendering machine that will win the Chopin concours by 2050, like RoboCup. The process of reaching that goal is expected to spawn many related research fields and yield many interesting results.

The choice of piano puts strong constraints on performance rendering systems. The choice means that the systems can control only three parameters for each note, the onset timing, duration and intensity. Other instruments, such as string instruments, allow players the control of other parameters, such as vibrato and spectral envelope. This limitation will possibly avoid divergence of research themes in the early stages of our project, and research will thereby concentrate on more general and basic principles of music performance.

The IJCAI-03 Rencon workshop builds upon the very successful ICAD 2002 Rencon
shouchan.ei.tuat.ac.jp/~rencon/ICAD2002

and FIT 2002 Rencon
shouchan.ei.tuat.ac.jp/~rencon/FIT2002

workshops, where we had musical contests as well as an invited talk and technical presentations.

The IJCAI-03 Rencon workshop will contain several technical sessions on general issues of music performance research, on AI-based music analysis and processing methods relevant to music performance, and on questions of evaluation. For this, technical papers are solicited for.

Specific topics to be discussed in the technical presentations of the workshop include (but are not limited to) the following:

- Theoretical aspects
  - o understanding tacit musical knowledge
  - o analysis of emotional aspects of performance and listening
  - o creativity and individuality
- Methodology
  - o modeling performance rendering processes
  - o musical data mining/retrieval/pattern recognition
  - o reasoning on continuous and discrete information
  - o learning capability
- Systems and applications
  - o interactive real-time control and user interface
  - o collaborative, autonomous system
  - o control techniques for a computer-controlled piano
  - o evaluating performances

The musical genres treated by the technical presentations are open, not limited to classical music.

The workshop will include a musical contest with both compulsory and open sections as well as several technical sessions. In the compulsory section, set pieces will be limited to Chopin's short piano pieces. In the open section, entrants will choose a piece so that the system developed by each entrant can come into full play; any genre is welcome. Basically, all performances will be rendered by a system automatically. That is, we will not accept performances that were manually rendered or fine-tuned (e.g., with a MIDI sequencer), and we trust the contest participants to adhere to this principle. All performances will be accompanied by technical notes specifying the performance rendering techniques used.

For the musical contest, a dedicated jury of a few music experts will be formed. Submitted performances will be performed one by one on the blind-test basis. The winners will be determined by the jury, which may also take into account the vote of the audience. Surprising awards for excellent performances rendered by systems will be presented.

There are two submission categories: paper and musical contest.

Paper category: Papers should be formatted according to the template provided by the IJCAI-03 web site

www.ijcai-03.org

Papers should not exceed 5000 words (approximately 10 pages); there is not a lower limit fixed. Papers should be sent electronically in PDF to

hirata@brl.ntt.co.jp

no later than March 1, 2003.

Musical contest category: The musical contest has two sections: compulsory and open. The open section is optional. The compulsory piece must be a short piano piece by Chopin (4 minutes at the longest). For the open section, entrants can choose any piece in any genre they like (4 minutes at the longest, too). Both performances should be generated by computer programs. In addition, for comparison, entrants also should generate a dead-pan (mechanical) version of the piece chosen for the open section. Send three performances (a compulsory piece, an open piece with expression, and a dead-pan open piece) or one performance (a compulsory piece) in SMF to

hirata@brl.ntt.co.jp

in one email no later than July 14, 2003.

The performances should be accompanied by technical notes in PDF. Technical notes should specify the concept, method, and implementation of the entries. Technical notes should be formatted using the same template as papers and not exceed 2000 words (approximately 4 pages); there is not a lower fixed limit. Technical notes should be sent electronically in PDF to

hirata@brl.ntt.co.jp

no later than April 25, 2003.

The IJCAI-03 Rencon workshop Web pages:

shouchan.ei.tuat.ac.jp/~rencon/IJCAI-03

Call for Papers and Works: 1st International Symposium on Computer Music Modeling and Retrieval

CMMR 2003

Montpellier, France, May 26-27, 2003

www.cs.aue.auc.dk/cmmr2003

cmmr2003@cs.aue.auc.dk

The use of computers in music is well established. CMMR 2003 provides an opportunity to meet and interact with peers concerned with the cross-influence of the technological and creative in computer music.

The field of computer music is interdisciplinary by nature and closely related to a number of computer science and engineering areas such as information retrieval, programming, human computer interaction, digital libraries, hypermedia, artificial intelligence, acoustics, signal processing, etc.

CMMR 2003 invites researchers, educators, composers, performers, and others with an interest in important aspects of computer music (including modeling, retrieval, analysis, and synthesis) to come join us for a unique event.

Original contributions on the following (and other relevant) topics are encouraged:

- infrastructures for music
- - music digital libraries modeling
- - representation and language modeling
- - distributed system infrastructures
- indexing and retrieval of music
- - metadata
- - standards
- - protocols
- - query languages
- - advanced information retrieval
- structuring of music data
- - hypermedia
- - structural computing
- collaboration on music
- - computer supported cooperative work
- analysis, recognition, comparison, classification, and modeling of music
- - pattern recognition
- - signal processing
- - algoritmics
- - parsing
- mining and visualizing music
- - data mining
- - visualization
- synthesis (composition) of music
- - models for synthesis
- - automated composition
- user interfaces for music
- - human computer interaction

The symposium will be structured somewhat differently than many traditional conferences by scheduling sessions intended to foster dialog within small groups in addition to plenary sessions to stress unifying themes. There will be ample opportunity for in-depth discussions to follow up on ideas presented at larger sessions, presentation of musical pieces, demonstration of computer music software, as well as informal gatherings.

Participation will be limited. All attendees will be required to submit at least one piece of work. (Submission formats are discussed below.) All submissions will be reviewed by the program committee. All accepted paper submissions will be published in the proceedings.

Submissions may have any of the following forms:

- Full paper (7 - 10 pages)

- Short paper (3 - 5 pages)
- Computer musical compositions

All papers will be reviewed by the program committee and accepted papers will be published after the symposium. It is planned to publish revised papers after the symposium as post-event proceedings in the Springer Verlag Lecture Notes in Computer Science (LNCS) Series.

Full papers due March 01, 2003

Short papers due March 01, 2003

Musical pieces due March 01, 2003

Acceptance notification April 15, 2003

Symposium May 26-27, 2003

Stockhausen-Kurse Kürten 2003

www.stockhausen.org
/stockhausen_courses.html

Die Interpretations- und Kompositionskurse zum Werk von Karlheinz Stockhausen finden vom 9. - 17. August in Kürten statt. Im Programm neben 11 Konzerten auch mehrere musikwissenschaftliche Vorträge enthalten.

Anmeldung ab sofort über

Lilly & Dettloff Schwerdtfeger GbR
Luxemburger Str. 266
50937 Köln
Germany
Tel.: +49 (0) 221 / 49 58 63
Fax: +49 (0) 221 / 800 68 73

dschwerdtfeger@stockhausen.org

Online-Registrierung über

www.stockhausen.org

Ostrava Days 2003

Summer Institute for Composers and Performers
August 11 - 31

Public Performances of New Music, August 25-30.

Ostrava Days 2003 Institute and Festival is an uncompromising program on the cutting edge of new music. The continuing mission of Ostrava Days is to make a significant contribution to the development of contemporary music with a focus on compositions for orchestra. Young and emerging composers and performers have the unique opportunity to work with leading personalities of contemporary music, including Christian Wolff, Olga Neuwirth, Petr Kotik, Tristan Murail, Alvin Lucier and other guests.

Residents also work with the Janacek Philharmonic Orchestra and the 40-piece Ostrava Center for New Music resident ensemble for the duration of the 21-day program. Orchestra compositions by resident-students are performed either as workshops, or during the week-long festival of public concerts at the end of the program.

Three weeks at Ostrava Days offers students the chance not only for daily contact with lectors and guests, but also to consult and analyze their own compositions in an international environment of similarly interested musicians. Ostrava's unique location between Prague, Vienna, Krakow, Warsaw and Berlin, makes it an ideal meeting point for participants and visitors from the East and West.

Application including application fee must be received by March 15, 2003. Tuition must be paid by May 15, 2003

Application fee: 250 Kc; 30 EUR; 30 USD

Tuition (includes full room and board): European applicants 2,200 EUR; All other applicants 2,200 USD
Ostrava Office:

Ostravske centrum nove hudby,
Dr. Smerala 2,
729 92 Ostrava, Czech Republic
tel/fax: +420-59-6203426,

New York Office:

Ostrava Center for New Music,
25 Columbia Place, Brooklyn,
NY 11 201, USA
tel: +1-718-4887659
fax: +1-718-2430964

info@ocnmh.cz
www.ocnmh.cz

CCMIX

Centre de Creation Musicale Iannis Xenakis

SUMMER INTENSIVE IN ELECTRO-ACOUSTIC MUSIC

June 30th - July 25th, 2003

CCMIX, the electro-acoustic studios of Iannis Xenakis, offers a month-long intensive course in electronic music and composition for English speaking students or practitioners of electronic music. The course takes place at CCMIX studios in Alfortville (Paris), France. Group class sessions and private creative work in the studios are the heart of this program. Classes will be taught by Gerard Pape (Director/composer, CCMIX, Columbia, U of Michigan, Ann Arbor), Curtis Roads (U Cal, Santa Barbara /CREATE), composer/software designer), Joel Chadabe (President, Electronic Music Foundation, composer, historian), James McHard (composer, author), and Agostino di Scipio (KYMA). Assistance in private studio work will be provided. All classes and studio sessions conducted in English. CCMIX maintains UPIC, KYMA and Pro-Tools stu-

dios as well as a wide variety of software applications. The UPIC is the revolutionary graphic composition/synthesis system created by Iannis Xenakis. CCMIX is supported in part by the French Ministry of Culture and Communication and by the Ministry of Foreign Affairs.

Field trips will be provided to observe other aspects of the French and European electronic music scene. In past years these have included Pierre Schaeffer's Groupe de Recherches Musicales (GRM) at Radio France; IRCAM at the Pompidou Centre; a Stockhausen electronic music performance in Amsterdam; Robert Ashley's "Dust" and other studio groups or individuals working at the classic or cutting edge.

Class enrollment is limited.

For further information contact:

Randall Neal
Admissions Director
CCMIX
1777 Middle Rd.
Plainfield, VT 05667 USA
obneal@vtlink.net
ccmix.com

University of Massachusetts, Dartmouth: Electronic Music / Music Theory

Tenure track position in redesigned music program. Candidates should have expertise in teaching all levels of electronic studio courses, as well as the ability to oversee all aspects of the electronic studios and computer lab. Candidates should also be able to teach the sophomore level theory sequence. The successful candidate will be expected to participate in student advising, committee assignments and other departmental and university duties.

Deadline: February 28. Send a letter of application, a curriculum vitae, transcripts, at least three letters of recommendation, and other supporting material by mail:

Search for Music Theory Faculty
Office of Human Resources
University of Massachusetts Dartmouth
285 Old Westport Road
No. Dartmouth, Massachusetts 02747, USA

Berklee College of Music: Chair, Music Synthesis Department

The Music Synthesis Department within the Music Technology Division at Berklee College of Music is now accepting applications for the position of Chair. The position reports directly to the Dean of the Music Technology Division. This is a 12 - month per year position. This position starts in Summer or Fall 2003, depending on the availability of selected candidate.The Music Synthesis Department prepares students for careers in the music industry through a curriculum which emphasizes audio and acoustic fundamentals and performance, production and sound design, utilizing contemporary synthesizer technology and computer-based MIDI and digital audio systems. The Chair recruits departmental faculty, assists in coordinating schedules, annually evaluates all teachers in the department, advises students,oversees departmental facilities, initiates programs for faculty development, and oversees the department budget. Additionally, the Chair teaches a limited number of hours, develops short-term and long-range goals for the department, supervises the updating of course content and classroom materials, oversees research in course development, maintains ties with music industryprofessionals, and oversees the management of department studios,labs, and teaching facilities. Requirements for the position include a Master's degree or equivalent professional experience, strong and effective interpersonal skills, and teaching and administrative experience, preferably in a college setting. Applicants must have substantial professional experience in electronic and acoustic music production, a thorough knowledge of current toolsets, techniques, practices and technologicaladvances in the field, and strong organizational skills. Salary: Commensurate with qualifications and experience.

Deadline: March 19. Please send your resume, three letters of recommendation, a disc containing no more than three recent productions or performances, and other appropriate documentation, along with your letter of application. Incomplete or late applications will not be considered. Send all required materials by mail:

Music Synthesis Department
Chair Search Committee
c / o Music Technology Division
Berklee College of Music
1140 Boylston Street
Boston, Massachusetts 02215, USA

University of California, Irvine: Assistant Professors (2) in Arts, Computation and Engineering (ACE)

Two tenure-track cross-disciplinary positions are available, in the area of Arts, Computation and Engineering (ACE), a new transdisciplinary program supported by the Claire Trevor School of the Arts, the Henry Samueli School of Engineering, and the School of Information and Computer Science. It emphasizes the development of cultural projects and practices involving real time computation and interaction. The successful candidates will play a core role in the ACE graduate program and will have the opportunity to be

centrally involved in the research agendas of the Arts Layer of the California Institute for Telecommunications and Information Technology. These include the visualization, simulation and interaction lab, the Game Culture and Technology Lab, and a (proposed) Center for Research in Interactive, Telematic and Immersive Culture. The campus has a vigorous research and teaching presence in such areas as digital media arts, interactive installation, electronic music, embodied interaction, live performance, game culture and technology, computer graphics, immersive visualization and simulation, HCI, CSCW, robotics, sensors, wireless and ubiquitous computing. We are seeking candidates in any area of computing or engineering and the arts that will complement or bolster these emphases. Applicants must have a Ph.D. in Computer Science or Engineering, an MFA / MA in Digital Arts, dual degrees, or demonstrated equivalent experience, with strong research credentials as evidenced by scholarly publications, research projects and/or public exhibition and projects.

Deadline: February 28 or until filled. Applications should include a cover letter, a statement of purpose including a page each on pedagogy and research, an up-to-date CV, three recent publications, audio visual documentation of research/practice, and letters from three to five references. Documentation of projects can be submitted on CD (Mac / PC compatible) or VHS video. Websites and online projects can be submitted on CD. Electronic applications are highly preferable. More information is available on the web and questions may be submitted by email.

www.ace.uci.edu
profrecruit@ics.uci.edu

For instructions for the submission of electronic applications:
www.ics.uci.edu/about/jobs/faculty.php

Art Technologies Developer & Theorist/Senior Lecturer

The Institute for Studies in the Arts (ISA) (isa.asu.edu) at the Herberger College of Fine Arts (HCFA) at Arizona State University (ASU).is seeking an artist, researcher and teacher specializing in art technologies development and theory. The successful candidate will collaborate with artists, engineers and researchers from other disciplines in state of the art facilities including motion capture studios, mediated performance stages, and engineering studios. Work will be conducted in the parallel, integrated development of hardware, software, content and theory for media and arts. Responsibilities also include the presentation of papers, research, teaching, grant development, and industry collaboration and participation.

The ISA in collaboration with the other units of the HCFA (Dance, Music, Visual Arts, Theatre, & Museum), the College of Engineering and Applied Sciences and other disciplines at ASU, supports creation, research, development, presentation and education at the intersection of the arts and technology. This is a 3 year, renewable appointment.

Minimum qualifications are Masters degree in a related discipline and 3 years of related professional experience or a Ph.D. in a related discipline; a strong record of creation and presentation of art works involving technology; demonstrated programming and interface development knowledge; research record in arts and technology including papers, grants and participation in interdisciplinary research projects. A Ph.D. in related field is desired. Please send a CV and a letter of application detailing the reasons you are applying for the position and how if fits in your professional plans to:

Todd Ingalls
Chair of Search Committee,
#7356 Institute for Studies in the Arts/CIRMAE
Arizona State University
PO Box 873302
Tempe, AZ 85287-3302, USA

todd.ingalls@asu.edu

Application deadline is March 5, 2003; if not filled, 1st of the month thereafter until search is closed. The anticipated start date is July 1, 2003. Arizona State University is an Equal Opportunity/Affirmative Action Employer.

Bellagio Study and Conference Center

The Rockefeller Foundation's Bellagio Study and Conference Center, located in northern Italy on Lake Como, is accepting applications for its artist residencies and workshops. Four of each take place each year. Scholars, artists and others may apply. Applicants can be citizens of any country and work in any discipline, providing they have significant and substantial publications, compositions, or other accomplishments to their credit. Composers who apply should anticipate their work at the Center resulting in publication or performance.

Deadlines are throughout the year. More information is available by email.
bellagio@rockfound.org

S U P E R C O L L I D E R

Einführung in die Programmierung, Teil 5

Andre Bartetzki

Dieser mehrteilige Einführungskurs zum Softwaresynthesizer SuperCollider (SC) begann in den Mitteilungen 40 und wird an dieser Stelle fortgesetzt.

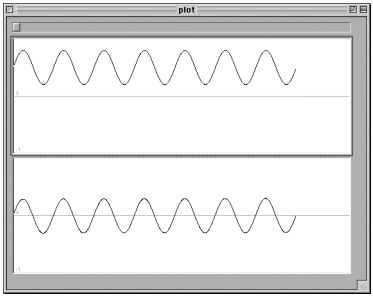
Informationen zum Download der Version 2 sowie zum Stand der neuen Version 3 für MacOSX siehe im grauen Kasten am Ende des Artikels.

Filter (Fortsetzung)

Die Filtersektion von SuperCollider ist sehr vielseitig. Außer den bereits vorgestellten im Bereich der Klang-synthese üblichen Tief-, Hoch- und Bandpassfiltern sowie den verschiedenen Versionen von Resonatoren finden wir eine Reihe von Filtern, die in ihrer aus der Theorie der Signalverarbeitung stammenden „Rohfassung" vorliegen. Dazu gehören `FOS`, `SOS`, `OnePole`, `OneZero`, `TwoPole`, und `TwoZero`, bei denen als Parameter statt Frequenz oder Filtergüte die Koeffizienten des zugrundeliegenden linearen Filtermodells angegeben werden müssen. Weitere Filter stellen Spezialfälle der eben aufgezählten dar - bei ihnen entfallen auch die Koeffizienten als Parameter. Zu diesen unveränderlichen Filtern gehören `LPZ1` und `LPZ2` (beides Tiefpässe bzw. Mittelwertfilter), `HPZ1` und `HPZ2` (Hochpässe bzw. Differenzfilter) sowie `BPZ2` und `BRZ2` (Bandpass und -sperre). Andere Filter, wie `Integrator` (Tiefpaß), `Slope`, `Decay` und `Median`, finden ihre Verwendung eher bei der Modifikation von Controllersignalen und weniger bei der direkten Klangbearbeitung.

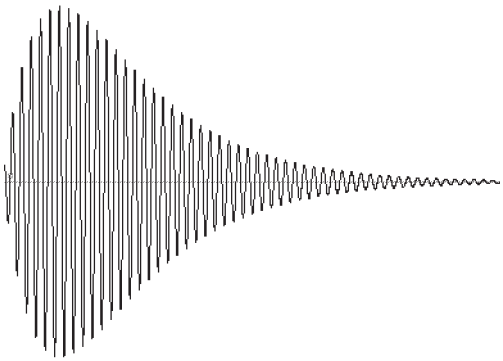
`LeakDC` dient zur Entfernung von Gleichspannungsanteilen im Signal, ist also eine Art Hochpass. Der Koeffizient von `LeakDC` regelt die „Grenzfrequenz" des Hochpasses: Werte nahe 1.0 entsprechen einer sehr geringen Grenzfrequenz, kleinere Werte wirken sich wie höhere Grenzfrequenzen aus. Das folgende Patch zeigt, wie der auf den Sinuston addierte Offset von 0.5 (Argument `add` von `SinOsc`) durch `LeakDC` wieder entfernt wird. Links das Signal mit Offset, rechts die gleichspannungsfreie Version:

```
( { var sig;
  sig = SinOsc.ar(700, 0, 0.3, 0.5);
  [sig, LeakDC.ar(sig, 0.995)]
}.plot)
```



Zum Abschluß des Überblicks über die Filter in SC soll `Formlet` besprochen werden. Mit `Formlet` wird die bekannte *FOF-Synthese*, eine Variante der Granularsynthese, in Form eines Filters implementiert. Bei der FOF-Synthese (FOF = Fonction d'ondes formantiques) werden synthetische Grains mit spezieller Hüllkurvenform periodisch erzeugt. Die Anzahl der Grains pro Sekunde ergibt den Grundton des neuen Klangs, während die Frequenz der Sinuswelle im Innern der Grains als *Formant* gehört wird. FOF ist also gut geeignet zur Synthese von Sprachlauten und anderen Klängen, bei denen es auf die genaue Kontrolle von Formanten ankommt. Dieses Verfahren wurde mit der am IRCAM entwickelten Software CHANT populär. Ein solcher FOF-Generator steht auch in SC zur Verfügung und heißt hier `Formant`.

Mit `Formlet` werden im Gegensatz zu FOF keine Grains generiert. Vielmehr legt `Formlet` eine spezielle *Impulsantwort* fest, die der eines engen Resonators mit einstellbarer Ein- und Ausschwingzeit entspricht. Diese Impulsantwort kann nun durch impulsförmige Eingangssignale „getriggert" werden. Das Ergebnis sind kurze Tonimpulse, von McCartney *Formlets* genannt:



So eine Filterantwort auf einen Impuls kann als Grain aufgefasst werden, wobei hier keine Grains überlagert werden müssen, wie das bei FOF der Fall ist, da bei `Formlet` das Filter immer nur neu angestoßen werden muß.

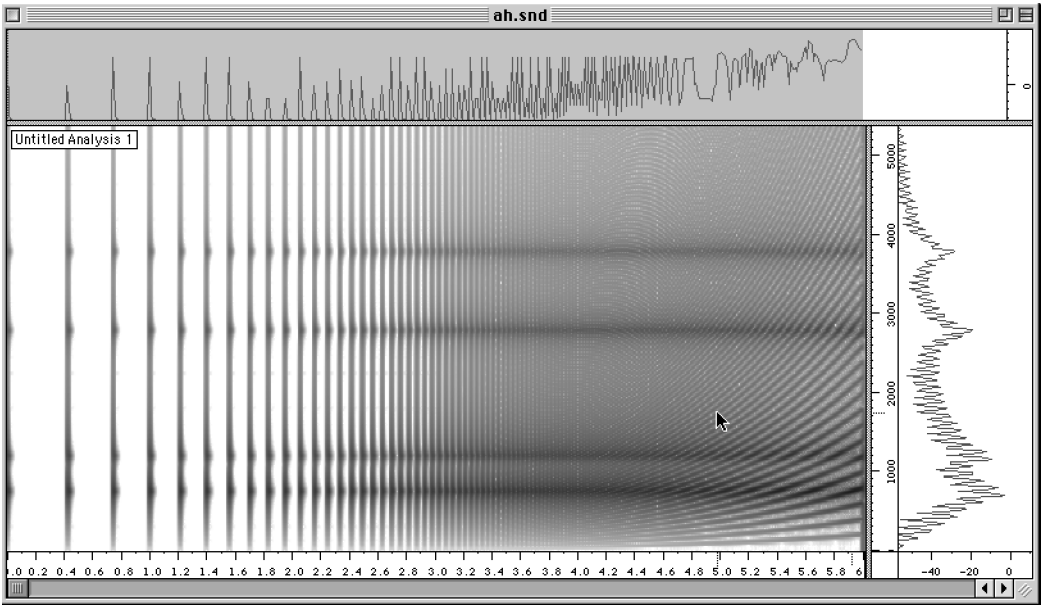
```
Formlet.ar(in, freq, attacktime,
                decaytime, mul, add)
```

Die zeitliche Dichte der Impulse, die als Input übergeben werden, bestimmt den Tonhöheneindruck, während `freq` die Mittenfrequenz des Formanten steuert. Ein- und Ausschwingzeit beeinflussen schließlich Bandbreite und Form des Formanten: lange Zeiten entsprechen geringen Bandbreiten und umgekehrt.

Zur Illustrierung dieses FOF-Filters nun das klassische Beispiel einer beschleunigten Tonimpulsfolge, die sich zu einem A-Vokalklang verdichtet. Dazu werden hier 4 parallele Formlets erzeugt, die mit den Frequenzen und den Amplituden der ersten vier Formanten des Vokals A einer durchschnittlichen Tenorstimme versehen werden. Während die Formanten fixiert bleiben, erhöht sich der „Grundton", d.h. die Frequenz der Impulsfolge, im Verlauf von 6 Sekunden von 2 auf 200 Hertz.

Die untenstehende Abbildung enthält ein mit Audiosculpt angefertigtes Sonagramm des Resultats. Die dunklen horizontalen Linien markieren die Orte der 4 Formanten. Das rechtsseitige Spektrum zeigt die Verhältnisse bei etwa 5 Sekunden (an der Position des Mauszeigers).

```
(
Synth.record({
Mix.ar(
  Formlet.ar(
    Impulse.ar(
      // Grundtonsteuerung:
      XLine.kr(2.0, 200.0, 6),
      0.5),
    // Formantfrequenzen:
    [750, 1200, 2800, 3800],
    // Attack, Decay:
    0.005, 0.03,
    // relative Amplituden:
    [0,-6,-16,-24].dbamp)
  )
}, 6, "ah.snd")
)
```



Alle bisher vorgestellten Synthese-Patches hatten ein gemeinsames Merkmal, egal im welchen Aspekt von Synthese oder Sampling es sich dabei handelte: was erzeugt wurde, war stets nur ein einziger Klang oder eine Textur von gleichartigen Klängen. Mit Ausnahme von `Sequencer` im Verbund mit `Decay` und ähnlichen Objekten haben wir bisher noch keine Methode kennengelernt, mit einem Patch *mehrere* Klangereignisse nacheinander oder unabhängig voneinander generieren zu können. In gewisser Weise ist uns SuperCollider bisher als ein mit vielen Reglern ausgestatteter Synthesizer bzw. Sampler erschienen, dem aber eine Tastatur zum Spielen zu fehlen scheint!

Die *Generierung* von Events, seien es mehrere Samples, Töne oder Grains, erfolgt in SuperCollider mit Hilfe von `Spawn` oder einigen anderen davon abgeleiteten Klassen. Im engen Zusammenhang mit der Erzeugung von Klangereignissen steht natürlich die Gestaltung ihrer *Hüllkurven* mit `Env` und `EnvGen`, die darüber hinaus auch für das korrekte Funktionieren von `Spawn` wichtig werden. Für die zeitliche Organisation und die algorithmische Strukturierung von *Events* zu musikalischen Ereignissen, wie Rhythmen, Motive, Melodien, Akkorde usw. steht eine umfangreiche Bibliothek von *Pattern* zur Verfügung, die fast schon so etwas wie eine eigene kleine Sprache innerhalb von SC darstellen. Auch die konventionelle Steuerung von Events über MIDI-Note-Messages wird von SC unterstützt.

Hüllkurven und *Spawner* sind die Voraussetzungen für die Programmierung von *Events* und *Pattern*. Beschäftigen wir uns daher zunächst mit der Beschreibung und Erzeugung von Hüllkurven bevor wir uns dann `Spawn` und seinen Verwandten zuwenden:

Envelopes

Die Arbeit mit Hüllkurven ist in SC ein zweistufiger Prozess: zuerst muß die Form einer Hüllkurve beschrieben werden, erst dann kann sie gestartet und ihre Abspielparameter eventuell modifiziert werden.

Eine ähnliche Zweiteilung findet man übrigens beim Wavetable-Oszillator: hier muss zunächst die Wellenform konstruiert und in einer Tabelle abgelegt werden. In SC gibt es dafür eine eigene Klasse `Wavetable`:

```
w = Wavetable.sineFill(512,
            1 / [1,2,3,4,5,6]);
```

Dann kann diese Wellenform innerhalb eines `Synth` von einem Audio- oder Controlrate-Oszillator benutzt werden:

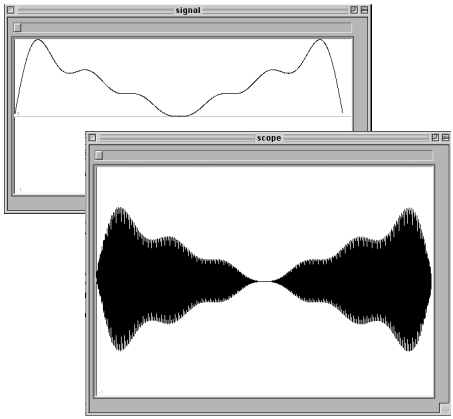
```
Osc.ar(w, 440);
```

Da die Beschreibung einer Wellenform noch nichts mit ihrem „Abspielen" zu tun hat, kann sie außerhalb der ugenGraph function erfolgen, während der Oszillator als UGen natürlich nur in einem `Synth` funktionieren kann:

```
(
var w;
w = Wavetable.sineFill(512,
            Array.geom(20, 1, 0.5));
Synth.play({
  Osc.ar(w, 440);
  })
)
```

Man kann nun solche Wellenformen auch als Amplituden-Hüllkurven benutzen. Dazu muss der Wertebereich angepasst werden, der sich bei Wellenformen typischerweise symmetrisch um den Nullpunkt von -1.0 bis 1.0 erstreckt, aber bei Hüllkurven nur von 0.0 bis 1.0 gehen sollte. Außerdem wird eine Hüllkurve in der Regel nicht periodisch wiedergegeben, sondern nur einmal durchlaufen:

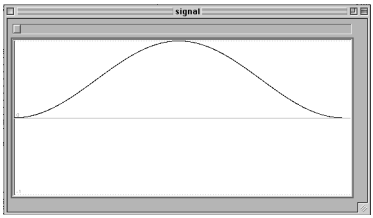
```
(
w = Wavetable.sineFill(1024,
              1.0/[1,2,3,4,5,6]);
w = w.asSignal.abs;
w.plot;
Synth.scope({
  a = Osc1.ar(w, 2);
  Saw.ar(400, a);
  }, 2)
)
```



Der hier verwendete `Osc1` ist ein spezieller Oszillator, der anstelle anstelle einer `Wavetable`-Instanz ein `Signal` erwartet und diese Tabelle nur einmal abspielt. Als zweites Argument wird anstelle der Frequenz die Abspieldauer in Sekunden erwartet.

Die Klasse `Signal`, die wir schon im Zusammenhang mit Samples und `PlayBuf` kennengelernt haben, stellt einige Fensterformen (wie `hamming`, `hanning` oder `welch`) für die Fourieranalyse bereit, die auch als Hüllkurven für die Granularsynthese nützlich sein können.

```
(
s = Signal.hanningWindow(512);
s.plot;
Synth.scope({
  a = Osc1.ar(s, 2);
  Saw.ar(400, a);
  }, 2)
)
```

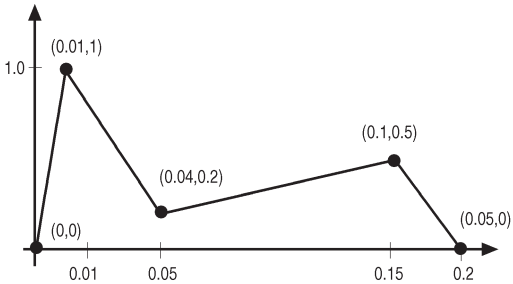


Diese Technik ist bei anderen Syntheseprogrammen, wie z.B. Csound, häufig anzutreffen. Allerdings ist der Umgang mit solcherart zu programmierenden Hüllkurven ungewohnt, vor allem, wenn man an die klassische ADSR-Segmentstruktur denkt. Außerdem fehlen auf diese Weise einige für das Echtzeitspiel besonders wichtige Eigenschaften, wie die Bestimmung von Release-Phasen oder geloopten Segmenten, völlig. Deshalb bietet SC eine eigene Klasse zur Spezifikation von segmentierten Hüllkurven sowie eine Klasse zu ihrem Abspielen an.

Diese Spezifikation erfolgt über das Objekt `Env`. Dazu wird die Message `new` zusammen mit mehreren Arrays, die die Segmente beschreiben, an das Klassenobjekt `Env` geschickt. Die Segmente werden durch Wert und Zeit ihrer Endpunkte sowie ihren Kurvenverlauf spezifiziert. Alle Werte, Zeiten und Kurvenformen werden in je einem Array zusammengefasst:

```
*new(levels, times, curves, ...)
```

Betrachten wir eine konkrete Hüllkurve und ihre Spezifikation mit `Env.new`. Zunächst die grafische Repräsentation:



In runden Klammern sind hier die Koordinaten der Eckpunkte als Paar (Wert, Zeit) angegeben. Zu beachten ist, daß die Zeit die Dauer eines Segments wiedergibt und nicht die absolute (von Beginn an gerechnete) Zeit dieses Punktes. Die absolute Zeit ist hier trotzdem zum Vergleich unter der Zeitachse eingetragen.

Das Array der Level sieht in diesem Fall so aus:

```
[0, 1, 0.2, 0.5, 0]
```

Das Array der Zeiten enthält nur 4 Elemente - ein Dauernwert für jedes Segment:

```
[0.01, 0.04, 0.1, 0.05]
```

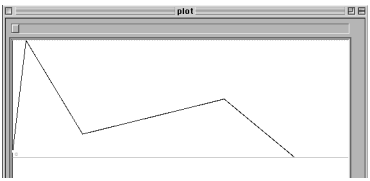
Da die Form der Segmente hier gleichbleibend linear ist, muß anstelle der Kurvenformliste nur das Symbol 'linear'eingetragen werden.

Die Spezifikation dieser Hüllkurve sieht nun so aus:

```
e = Env.new([0,1,0.2,0.5,0],
    [0.01,0.04,0.1,0.05], 'linear');
```

Die Klasse `Env` kennt 2 Messages, mit denen Hüllkurven an Ort und Stelle getestet werden können: `plot` und `test`.

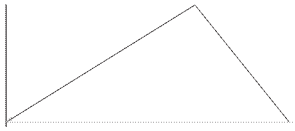
Für die eben spezifizierte Hüllkurve `e` ruft `e.plot` das folgende Fenster auf:



Die Message `test` „spielt" die Hüllkurve mit einem 800 Hz Sinuston ab.

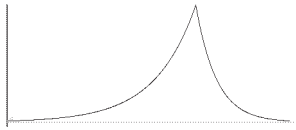
Für den Verlauf der Segmente stehen verschiedene Kurvenformen bereit, die entweder durch Symbole oder durch Zahlen spezifiziert werden. Hier die Bilder einer einfachen 2-teiligen Hüllkurve mit den unterschiedlichen Formen:

```
Env([0,1,0],[2,1],'linear').plot;
```



Bei exponentiellen Hüllkurven dürfen keine Level mit dem Wert 0 vorkommen, außerdem müssen alle Level das gleiche Vorzeichen haben:

```
Env([0.01,1,0.01],[2,1],'exponential').plot;
```



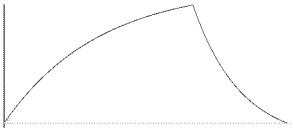
```
Env([0,1,0],[2,1],'sine').plot;
```

```
Env([0,1,0],[2,1],'welch').plot;
```

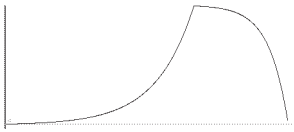
```
Env([0,1,0],[2,1],'step').plot;
```

Mit den Zahlenwerten der *curvature* können beliebig stark konkav oder konvex gekrümmte Verläufe erzeugt werden. Der Wert 0 entspricht einem linearen Verlauf.

```
Env([0,1,0],[2,1], -2).plot;
```

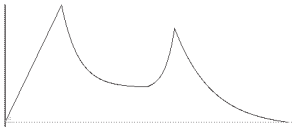


```
Env([0,1,0],[2,1], 5).plot;
```



Mehrere dieser Zahlen können zusammen in einem Array übergeben werden, so daß jedes Segment eine eigene Krümmung aufweisen kann:

```
Env.new([0,1,0.3,0.8,0],[2,3,1,4],
        [0,-5,3,-3]).plot;
```



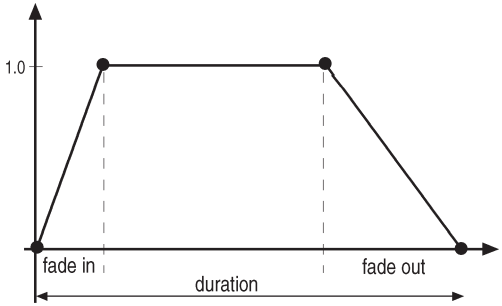
Ein Teil der Segmente lassen sich der *Release-Phase* eines Klanges zuordnen. Dazu gibt man nach dem Kurvenwert bzw. -array einfach die Nummer der Knotenpunktes an, ab dem die Abklingphase beginnen soll. Die Zählung der Punkte beginnt mit 0. Falls ein Release-Knoten angegeben wurde, wird die Hüllkurve beim Abspielen nur bis zu diesem Punkt durchlaufen, dann wird der letzte Wert beibehalten bis der `Synth` oder der `Spawn`, die die Hüllkurve enthalten haben, eine Release-Message erhalten - erst dann wird der Rest der Hüllkurve abgearbeitet. Solche Release-Messages werden z.B. bei der Steuerung durch MIDI-Note-Messages oder durch Event-Pattern erzeugt.

Schließlich kann auch noch ein *Loop-Knoten* festgelegt werden. Gelangt eine Hüllkurve an den Release-Knoten und wurde ein Loop-Knoten spezifiziert, werden die Segmente zwischen diesen beiden Knoten in einer Schleife solange abgespielt, bis eine Release-Message eintrifft.

`Env.new` kennt also letztlich 5 Argumente: `levels`, `times`, `curves`, `releaseNode` und `loopNode`.

Um den Umgang mit den Arrays und der Fülle der Parameter etwas zu erleichtern, wurden für `Env` eine Reihe von weiteren Messages programmiert, die einfache Standardverläufe in die für Hüllkurven notwendige times- und levels-Arraystruktur nach Art eines Makros übersetzen.

Um zum Beispiel einen Klang am Beginn sowie am Ende nur kurz ein- bzw. auszublenden,



müsste man in etwa folgendes schreiben:

```
dur = 10;  // Gesamtdauer
e = Env.new([0,1,1,0],
       [0.1,dur-0.3, 0.2], 'linear');
```

Mit Hilfe der Message `linen` läßt sich das Gleiche aber kürzer formulieren:

```
dur = 10;  // Gesamtdauer
e = Env.linen( 0.1, dur-0.3, 0.2);
```

Wie man sieht, muß man nur die Zeiten der 3 Phasen (Einschwingen, Haltephase, Ausschwingen) angeben. Alle anderen Werte werden von `linen` selbst erzeugt!

`triangle`, `sine`, `perc`, `adsr` und `asr` erzeugen weitere häufig verwendete Hüllkurvenverläufe. Diese Methoden und ihre Argumente findet man ausführlich im Helpfile von `Env` beschrieben.

Wie bereits angedeutet wurde, existiert für das Generieren bzw. „Abspielen" von mit `Env` spezifizierten Hüllkurven ein spezieller Unit Generator: `EnvGen`.

`EnvGen`, der als UGen nur innerhalb eines `Synth` angelegt werden kann, erwartet als erstes Argument eine `Env`-Spezifikation, danach folgen `mul`, `add`, einige Modifikationsparameter für die Hüllkurve und ein `gate`-Input zum Triggern und Re-Triggern der Hüllkurve.

Soll die Hüllkurve die Amplitude eines Audiosignals steuern, ordnet man dieses Audiosignal typischerweise dem `mul`-Eingang von `EnvGen` zu:

```
( var env, dur;
dur = 2.0;
env = Env.perc(0.01, dur);
Synth.play({
  var sig;
  sig = Saw.ar(500);
  EnvGen.ar(env, sig);
  })
)
```

Da bei einer Multiplikation die Faktoren vertauscht werden können, kann man es äquivalent auch so schreiben:

```
( var env, dur;
dur = 2.0;
env = Env.perc(0.01, dur);
Synth.play({
  var amp;
  amp = EnvGen.ar(env);
  Saw.ar(500, amp);
  })
)
```

Der einzige Unterschied zwischen diesen beiden Methoden besteht darin, daß im letzten Fall der Hüllkurvengenerator `EnvGen` durchaus auch mit Controlrate `kr` betrieben werden könnte. Auf diese Weise ließe sich in kritischen Echtzeitanwendungen etwas CPU-Leistung einsparen.

`Env` und `EnvGen` können selbstverständlich auch zur Steuerung anderer Parameter herangezogen werden, z.B. für die Tonhöhe:

```
( var mod, dur;
dur = 2.0;
mod = Env.new([0, 24, 0],
          [dur/2, dur/2], [6, -6]);
Synth.play({
  var pitch;
  pitch = EnvGen.kr(mod, 1, 69);
  Saw.ar(pitch.midicps)
  })
)
```

Unter Zuhilfenahme der anderen EnvGen-Parameter levelScale, levelBias und timeScale kann eine per Env beschriebene Hüllkurve nachträglich skaliert, vertikal verschoben und zeitlich gedehnt bzw. gestaucht werden. Letzteres ermöglicht es zum Beispiel, Hüllkurven zunächst mit einer abstrakten Gesamtdauer von 1.0 zu definieren, und dann später beim Abspielen auf die gewünschte kürzere oder längere reale Dauer zu skalieren:

```
( var e;
e = Env.sine(1.0);
15.do({
  var dur, freq;
  dur = rrand(0.1, 0.7);
  freq = rrand(500.0, 1000.0);
  Synth.play({
     EnvGen.ar(e, Saw.ar(freq),
              timeScale: dur)
     }, dur + 0.2)
  })
)
```

Dieses Beispiel zeigt auch, auf welche Weise es möglich ist, in SuperCollider mehrere Klangereignisse nacheinander zu erzeugen. do haben wir bereits im Abschnitt über Collections und Iterationen kennengelernt. Hier sehen wir, daß do auch über ganze Zahlen iterieren kann: do zählt dabei von 0 bis zum Wert-1 des Receivers.

Diese Methode ist allerdings reichlich unflexibel, da sie nur streng sequentielle Abläufe gestattet, denn der nächste Schleifendurchlauf wird erst dann gestartet, wenn alle darin enthaltenen Programmschritte abgearbeitet worden sind, also erst, wenn der aktuelle Synth nach dur+0.2 Sekunden gestoppt wurde.

Besser wäre es, wenn die Events, d.h. die einzelnen Synth-Objekte, zeitlich unabhängig voneinander erzeugt werden könnten. Genau für diesen Zweck wurde die Klasse Spawn geschaffen - eines der leistungsfähigsten Konzepte in SuperCollider.

Spawn

Sehen wir uns die do-Schleife des letzten Beispiels noch einmal an: Es gibt eine *ugenGraph function*, die *n-mal* für eine bestimmte Dauer aufgerufen wird. Gleichzeitig wird festgelegt, *wann* die nächste Wiederholung sein wird.

Dies sind auch die Eigenschaften, die das Objekt Spawn auszeichnen:

```
Spawn.ar(newEventFunc, numChannels,
  nextTime, maxRepeats, mul, add)
```

Spawn „brütet" eine bestimmte Anzahl (maxRepeats) neuer Events gemäß der newEventFunc nach jeweils nextTime Sekunden aus und mischt die enstandenen ein- oder mehrkanaligen (numChannels) Audiosignale in den Output. Spawn ist also ein ganz besonderer unit generator, der weder Klänge generiert, wie etwa ein Oszillator, noch Klänge bearbeitet, wie etwa ein Filter oder ein Delay. Vielmehr erfüllt Spawn eigentlich die Aufgaben, die bisher ein Synth übernommen hat: komplexe Klangereignisse gemäß einer ugenGraph function zu erzeugen. Trotzdem muß das Spawn-Objekt selbst auch in einem Synth installiert werden.

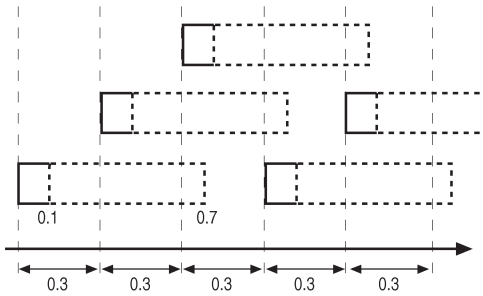
Das vorige do-Beispiel mit Hilfe von Spawn formuliert, könnte in etwa so aussehen:

```
( var e;
e = Env.sine(1.0);
Synth.play({
  Spawn.ar({
     var dur, freq;
     dur = rrand(0.1, 0.7);
     freq = rrand(500.0, 1000.0);
     EnvGen.ar(e, Saw.ar(freq),
              timeScale: dur)
     }, 1, 0.5, 15)
  })
)
```

Dabei gibt es aber ein entscheidendes Problem: in der ursprünglichen do-Schleife waren Dauer und Einsatzabstand synchronisiert. Nach verstrichener Dauer soll also das nächste Event erzeugt werden. Aber in unserem Spawn-Beispiel wird die Dauer der Hüllkurve *im Inneren* der Audiofunktion per Zufall generiert, während die Angabe der nextTime *außerhalb* dieser Funktion als 3. Argument von Spawn.ar erfolgen soll. Wir können aber vorher die einzelnen Dauern noch gar nicht kennen und

können diese Werte deshalb auch nicht als `nextTime` eintragen, zumal es mehrere Werte wären und nicht nur ein einziger! Die Parameter `numChannels, nextTime, maxRepeats` haben mit der übergebenen Funktion nichts zu tun, es sind von ihr unabhängige Werte. Als „Notlösung" wurde deshalb vorerst ein konstanter Wert von 0.5 Sekunden für die `nextTime` gewählt.

Wenn man nun diesen Wert verkleinert, z.B. auf 0.3, kann man deutlich bemerken, daß sich einige Events überlappen! `Spawn` startet also die Events sequentiell, aber je nach ihrer Dauer können sie sich überlagern oder ein Pause lassen. In unserem Beispiel sieht das Möglichkeitsfeld für Dauern und Einsatzabstände so aus:



Es ist allerdings auch erlaubt, als `nextTime` eine Funktion anstelle eines konstanten Wertes einzusetzen. In diesem Fall wird bei jedem neuen Event diese Funktion aufgerufen und das Ergebnis als neue `nextTime` verwendet. Im folgenden Beispiel wurde die Zahl 0.5 durch eine solche Funktion ersetzt:

```
( var e;
e = Env.sine(1.0);
Synth.play({
  Spawn.ar({
     var dur, freq;
     dur = rrand(0.1, 0.7);
     freq = rrand(500.0, 1000.0);
     EnvGen.ar(e, Saw.ar(freq),
              timeScale: dur)
     }, 1, {rrand(0.1, 0.7)}, 15)
  })
)
```

Jetzt die Einsatzabstände ebenfalls variabel, aber leider immer noch nicht mit den Dauern synchronisiert!

Bevor wir eine Lösung für dieses Problem finden, soll noch einmal genauer betrachtet werden, was das „Ausbrüten" von Events durch `Spawn` eigentlich bedeutet. Gehen wir sogar noch einen Schritt zurück: was macht ein `Synth`? Das Helpfile zu `Synth` gibt folgende Auskunft: *„A Synth is a container for one or more unit generators that execute as a group"*. Unter welchen Bedingungen diese Gruppe von UGens ausgeführt wird, hängt von der aufrufenden Message an `Synth` ab: `play` erzeugt eine Instanz von `Synth` und spielt das Ergebnis hörbar ab, `scope` macht es zusätzlich sichtbar, `write` schreibt es offline auf die Festplatte usw.

Diese „Container" können auch verschachtelt werden:

```
(
Synth.play({
  Synth.play({SinOsc.ar(300)}, 0.5);
  Synth.play({
     Resonz.ar(
        Saw.ar(350),
        XLine.kr(2000.0, 300.0, 1.5))
     }, 1.5);
  Impulse.ar(20, 0.2);
  }, 3.0)
)
```

Dabei wird auch hier die Audiofunktion des äußeren Synthesizers Schritt für Schritt abgearbeitet. Das heißt, zuerst wird ein neuer `Synth` erzeugt, dessen Audiofunktion evaluiert, gemäß der Message `play` gespielt und nach 0.5 Sekunden wieder deinstalliert. Dann wird wieder ein neuer `Synth`, diesmal mit einer komplexeren Audiofunktion aus 3 unit generators für eine gewisse Zeit gespielt. Schließlich wird ein normaler Impulsgenerator im Rahmen des äußeren `Synth` erzeugt und für 3 Sekunden gespielt. Wie in der `do`-Schleife, werden auch hier die inneren `Synth`-Instanzen sequentiell abgearbeitet, wobei mit dem Ende eines `Synth` auch die von ihm aufgerufenen unit generators „ausgeschaltet" werden und somit die CPU nach getaner Arbeit nicht mehr belasten.

Die beim Ausführen von Synth-Instanzen erzeugte Informationsleiste ermöglicht die Beobachtung der wechselnden Anzahl von UGens, je nachdem, welcher Synth zur Zeit aktiv ist:

```
50   Vol:   0 dB   UGens:   1
50   Vol:   0 dB   UGens:   3
50   Vol:   0 dB   UGens:   1
```

Kehren wir nun zurück zu Spawn. Die eigentlich Aufgabe von Spawn ist es, das Erzeugen solcher Synth-Instanzen in einer Art Schleife zu automatisieren und gleichzeitig deren parallele Abarbeitung zu erlauben, indem die von ihnen erzeugten Audiosignale *gemischt* werden. Die von Spawn erzeugten Events, von denen bisher gesprochen wurde, sind also eigentlich dynamisch erzeugte lokale Synth-Instanzen, die alle die gleiche Audiofunktion besitzen - nämlich die, die dem Spawn als 1. Argument übergeben wurde. Spawn ist also ein Art Maschine, die Synth-Objekte herstellt und sie mit Kopien ein und derselben Audiofunktion ausstattet.

Die so erzeugten Synth-Instanzen kennen allerdings kein Dauernargument, wie es bei der Message play existiert. Stattdessen muß in der Audiofunktion eine Hüllkurve aufgerufen werden, nach deren Durchlauf die jeweilige Synth-Instanz terminiert wird.

Startet man das folgende Patch

```
(
Synth.play({
  Spawn.ar({
     Impulse.ar(rrand(1.0, 7.0), 0.2)
     }, 1, 3, nil)
  })
)
```

und beobachtet gleichzeitig in der Informationsleiste die Anzahl der UGens, wird man feststellen, daß nach jeweils 3 Sekunden (nextTime) ein neuer Impulsgenerator hinzukommt. Da die Variable maxRepeats auf nil gesetzt ist, da also unbegrenzt viele Synths „gespawnt" werden, ist die Überlastung der CPU nach einer gewissen Zeit unvermeidlich! Dieses Patch sollte also spätestens beim Überschreiten der 90%-Marke der CPU-Auslastung mit [CMD-.] abgebrochen werden.

Erst der Einsatz einer Hüllkurve mit bestimmter Dauer kann die von Spawn installierten Synthesizer auch wieder entfernen:

```
(
Synth.play({
  Spawn.ar({
     EnvGen.ar(
       Env.perc(0.01,rrand(0.1,2.0)),
       SinOsc.ar(rrand(3.0,5.0)*1000,
                 0, 0.1))
     }, 1, {rrand(0.1, 0.3)}, nil)
  })
)
```

Ist eine Hüllkurve an ihrem Ende angelangt, wird der „gespawnten" Synth-Instanz ebenfalls das Ende signalisiert. Daraufhin werden die von diesem Synth aktivierten UGens deinstalliert und der Synth gestoppt. Spawn sollte also immer im Zusammenhang mit einer Amplitudenhüllkurve betrieben werden!

Auf den ersten Blick mag es als merkwürdige Umkehrung von Zuständigkeiten erscheinen, daß ein Hüllkurvengenerator einer ugenGraph function den Synthesizer, der die in dieser Funktion enthaltenen Generatoren ja erst ins Leben ruft, beenden kann! In SuperCollider stellt jedoch der Zugriff auf Eigenschaften von „Mutterobjekten" wie Synth und Spawn ein weiteres wichtiges und leistungsfähiges Konzept dar. Innerhalb einer Audiofunktion können damit eine ganze Reihe von Eigenschaften der aufrufenden Synth- oder Spawn-Instanzen gelesen oder verändert werden.

Hierbei muss man zwischen Eigenschaften der gesamten Klasse, sogenannten *Klassenvariablen*, und Eigenschaften der Instanzen, den *Instanzenvariablen*, unterscheiden. Auf erstere kann direkt zugegriffen werden, ohne daß man vorher eine Instanz dieser Klasse erzeugt hat:

```
Synth.hardwareName.postln
-> Apple Sound Manager

Synth.sampleRate.postln
-> 44100
```

hardwareName und sampleRate sind also Eigenschaften der Klasse Synth und somit allen Synth-Instanzen gemeinsam.

Um den gezielten Zugriff auf die Eigenschaft einer Instanz zu ermöglichen, sollte dieses Objekt bei der Erzeugung benannt werden:

```
a = List[3,4,5,6];
a.size.postln;
-> 4
```

Damit auch in einer ugenGraph function die Instanz des aufrufenden Spawn oder Synth bekannt ist, wird diese Instanz der Audiofunktion als Argument übergeben. Dabei kann der Name dieses Arguments frei gewählt werden. Wie bei allen Funktionen erfolgt die Angabe der Argumente zu Beginn der Funktion nach dem *reservierten Bezeichner* arg:

```
Synth.play({ arg synth ....
```

```
Spawn.ar({ arg spawn ....
```

Der erste Programmschritt in der folgenden Audiofunktion druckt den Wert einer Variablen einer Synth-*Instanz*, während in der darauffolgenden Zeile der Wert einer Variablen der *Klasse* Synth gedruckt wird.

```
(
Synth.play({ arg synth;
  synth.blockSize.postln;
  Synth.sampleRate.postln
  WhiteNoise.ar(0.3)
  }, 4.0)
)
-> 128
-> 44100
```

Die Deklaration von Argumenten in der ugenGraph function ist optional: wenn sie erfolgte, kann man auf den Wert des Arguments zugreifen, wenn man dagegen kein Argument angegeben hat, kann man es auch nicht verwenden!

Spawn übergibt seiner newEventFunc gleich 3 solcher Argumente:

spawn - das 1 Argument ist die Instanz von Spawn, die durch Spawn.ar generiert wurde.

eventCount - das 2. Argument ist die Nummer des erzeugten Events, beginnend bei 0 für das erste Event.

synth - das 3. Argument ist die Instanz des von Spawn erzeugten lokalen Synth-Objektes

Ein Beispiel für die Verwendung des eventCounts:

```
(
Synth.play({
  Spawn.ar({ arg sp, i, sy;
     EnvGen.ar(Env.sine(0.2),
        Saw.ar(i*200 + 200, 0.2))
     }, 1, 0.1, 24)
  }))
```

Es soll an dieser Stelle noch einmal betont werden, daß nicht der Name des Arguments für dessen Bedeutung wichtig ist, sondern nur die Position dieses Names in der Deklaration der Argumente, d.h. nach dem Wort arg! Die Deklaration der Argumente kann außerdem nur unmittelbar zu Beginn einer Funktion erfolgen. Direkt danach können sich dann eventuelle Variablendeklarationen anschließen. Sinnvollerweise vergibt man für diese Argumente, wie für alle Variablen, aussagekräftige Bezeichnungen. Deshalb wurde im letzten Beispiel für eventCount das für Schleifenvariablen typische i gewählt und für die beiden Instanzenargumente entsprechende Abkürzungen.

Da wir nun innerhalb der Audiofunktion auch auf die Spawn-Instanz zugreifen können, sind wir jetzt in der Lage, auch deren nextTime-Variable zu verändern! Kommen wir also zu unserem ersten Beispiel zurück und modifizieren es entsprechend, um Dauer und Einsatzabstand zu synchronisieren:

```
( var e;
e = Env.sine(1.0);
Synth.play({
  Spawn.ar({ arg sp, i, sy;
     var dur, freq;
     dur = rrand(0.1, 0.7);
     sp.nextTime = dur + 0.2;
     freq = rrand(500.0, 1000.0);
     EnvGen.ar(e, Saw.ar(freq),
              timeScale: dur)
     }, 1, nil, 15)
  })
)
```

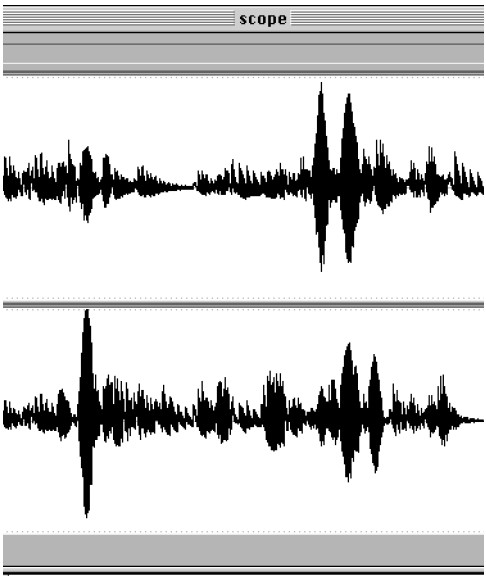
Jedes Event kann dem Eventgenerator also mitteilen, wann das jeweils folgende Event starten soll. Damit lässt sich zum Beispiel die folgende gleichzeitig von inneren und äußeren Bedingungen abhängige Regel für Einsatzabstände implementieren: falls die zufällig erzeugte

Frequenz einen bestimmten Wert überschreitet, folgt der nächste Ton nach 20 ms, ansonsten wird der Abstand zum nächsten Ton von der aktuellen Mausposition bestimmt.

```
(
Synth.play({
  m = MouseX.kr(1.0, 0.1);
  Spawn.ar({ arg sp, i, sy;
     var dur, next, freq;
     dur = rrand(0.1, 0.4);
     freq = rrand(40.0,100.0).midicps;
     if(freq > 1000,
        { next = 0.02 },
        { next = m.poll });
     sp.nextTime = next;
     EnvGen.ar(Env.perc(0.01, dur),
        Saw.ar(freq, 0.2))
     }, 1)
  })
)
```

Da das Objekt Spawn sich auch wie ein normaler UGen verhält, kann eine Spawn-Instanz auch mit anderen UGens verknüpft werden. Hier wird ein Strom von Events durch ein interaktiv gesteuertes Filter geleitet:

```
(
Synth.scope({
  var source, res, rq;
  res = MouseX.kr(60.0,130.0).midicps;
  rq = MouseY.kr(1.0,0.02, \exponential);
  source =
     Spawn.ar({
        arg sp;
        var dur, freq, pan;
        freq = rrand(40.0, 80.0).midicps;
        dur = 20.0 / freq;
        sp.nextTime = dur / 4;
        pan = 1.0.rand2;
        EnvGen.ar(
           Env.perc(0.01,dur),
           Pan2.ar(Saw.ar(freq, 0.2),
              pan))
        }, 2);
  RLPF.ar(source, res, rq)
  })
)
```



Parallele Eventstreams

Ebenso können mehrere Spawner „parallel" aktiviert werden, um voneinander unabhängige Eventströme zu erzeugen. Für die Ausgabe müssen diese dann selbstverständlich noch zusammengemischt werden, wie im folgenden Beispiel.

```
(
Synth.scope({
  var franges, durs, amps, rqs, nchan;
  franges =
     [[80,150], [500,570], [5000,6000]];
  durs = [1, 12.0, 0.07];
  rqs = [0.03, 0.1, 0.4];
  amps = [0.7, 0.2, 0.1];
  nchan = 4;
  Mix.ar( franges.collect({ arg range, i;
     Spawn.ar({ arg sp;
        var dur, freq, pan;
        freq =
           rrand(range.at(0),range.at(1));
        dur =
           durs.at(i) * rrand(0.6, 1.2);
        sp.nextTime =
           dur * rrand(0.5, 2.0);
        pan = 1.0.rand2;
```

```
        EnvGen.ar(
           Env.perc(0.01,dur),
           PanAz.ar(
              nchan,
              RLPF.ar(
                 Mix.ar(
                    Saw.ar(
              [freq, freq*rrand(0.9,1.1)],
                      amps.at(i) / 4)),
                 XLine.ar(
                    freq*2, freq/2, dur/2),
                 rqs.at(i)),
              pan))
     }, nchan);
     }))
  })
)
```

In diesem Patch werden 3 `Spawn`-Objekte erzeugt, deren Events aus je 2 gegeneinander leicht verstimmten Oszillatoren bestehen, die durch einen resonanten Tiefpass dynamisch gefiltert, anschließend quadrophon positioniert und mit einer perkussiven Hüllkurve versehen werden. Durch die unterschiedlichen Werte für Frequenzbereich, Dauer, Amplitude und Filtergüte, die aus jeweils 3-elementigen Listen kommend mit Hilfe der `collect`-Schleife den drei Spawns zugeordnet werden, werden diese 3 Eventströme klanglich differenziert. Weil jeder der drei Spawns in diesem Patch 4 Audiokanäle erzeugt, müssen diese 3 x 4 Kanäle mit `Mix` zu 4 Kanälen zusammengefasst werden.

OrcScore

Will man ganz unterschiedliche Synthese-Patches mit Hilfe von Parameterlisten steuern, bietet sich statt `Spawn` die davon abgeleitete Klasse `OrcScore` an. `OrcScore` realisiert den klassischen Ansatz der Zweiteilung der Klangerzeugung in eine Beschreibung der inneren Struktur von Klangerzeugern (Instrument, Patch, Preset u.ä.) und eine Steuerung derselben (Partitur, MIDI-File u.ä.). Schon der Name `OrcScore` verweist auf das aus den Music*N*-Sprachen entwickelte Csound, das lange Zeit mit 2 zwei getrennten Dateien operierte: dem *Orchestra*- und dem *Score*-File. (Inzwischen ist die strenge Zweiteilung in Csound durch verschiedene Echtzeitversionen, Eventsteuerung in den Instrumenten und ein neues Dateiformat relativiert worden.)

In SuperCollider verwirklicht `OrcScore` dieses Prinzip durch zwei zu übergebende Listen: eine Liste mit „Instrumenten", d.h. ugenGraph functions, und eine Liste mit Events, die jeweils wiederum durch eine Liste mit Einsatzabstand, Instrumentennummer bzw. -name, Dauer und beliebigen weiteren Parametern beschrieben werden, ähnlich den *pfields* in Csound.

```
OrcScore.ar(orchestra, score, numChannels,
          nextTime, maxRepeats, mul, add)
```

Jedem „Instrument" im `orchestra` müssen dabei nicht nur die normalen `Spawn`-Argumente `spawn, i` und `synth` übergeben werden, sondern auch der Einsatzabstand, die Nummer bzw. das Symbol für eben dieses Instrument sowie die anderen optionalen Parameter, die für dieses Instrument Verwendung finden sollen, z.B. Dauer, Frequenz, Amplitude usw. Diese Parameter werden dann aus der Score-Liste dem Instrument beim Aufruf übergeben.

Im Folgenden soll nur kurz die Struktur dargestellt werden. Für vollständige Beispiele sei auf das Helpfile zu `OrcScore` sowie auf mitgelieferte Examples, wie z.B. in der Datei „time structures", verwiesen.

```
(
Synth.play({
  OrcScore.ar(
     // orchestra array:
     [
        // instr 1
        { arg spawn, i, synth, deltaTime,
             instrumentNum, ...;
           // code
        },
        // instr 2
        { arg spawn, i, synth, deltaTime,
             instrumentNum, ...;
           // code
        }
     ],
     // score array:
     [
        [ <parameterliste event 1>],
        [ <parameterliste event 2>],
        [ <parameterliste event 3>],
        (...)
     ],
     1, nil, 1)
  })
)
```

TSpawn und verschachtelte Eventstreams

Spawn, OrcScore sowie die meisten anderen, hier nicht besprochenen Spawner, wie Cycle, RandomEvent, SelectEvent, XFadeTexture und OverlapTexture erzeugen die Events zu einer bestimmten Zeit nextTime, die entweder eine Konstante ist oder aus einer Liste stammt oder auf irgendeine Weise errechnet wird.

Insbesondere in Echtzeitanwendungen wird es aber oft nötig sein, Klangereignisse in Abhängigkeit von nicht vorhersehbaren, meist externen Ereignissen auszulösen. Die Spawn-Klassen TSpawn, TrigXFade und Voicer erlauben die Verwendung von Triggersignalen zur Erzeugung von Events.

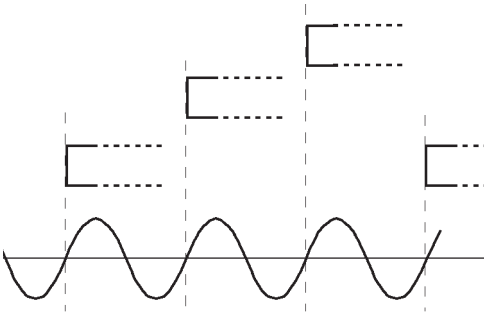
Im Falle von TSpawn (= *triggered spawn*) wird der *Trigger* anstelle des nextTime-Arguments eingesetzt. Ansonsten funktioniert TSpawn genauso wie Spawn:

```
TSpawn.ar(newEventFunc, numChannels,
          maxRepeats, trig, mul, add)
```

Zu beachten ist, daß das trig-Argument *nach* maxRepeats folgt, im Gegensatz zum nextTime-Argument von Spawn und anderen, das maxRepeats voran geht.

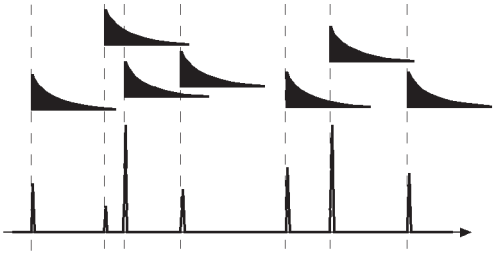
Ein Trigger kann jedes Signal sein. Getriggert wird ein Event bei Signalübergängen von nicht-positiven (Null und negative Werte) zu positiven Werten. Somit sind vor allem alle Arten von impulsförmigen Signalen, wie Impulse und Dust, aber auch externe Controller, wie Mouse oder MIDIController, die natürlich entsprechend skaliert werden müssen, geeignet.

Letztlich kann aber jedes Signal, z.B. von einem Sinus-Oszillator, verwendet werden:

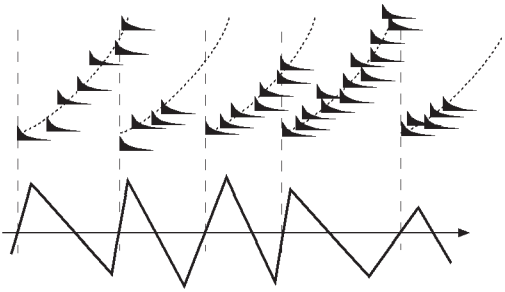


Hier triggern die unregelmäßig auftretenden positiven Impulsflanken von Dust hohe perkussive Klänge:

```
(
Synth.play({
  TSpawn.ar({
     EnvGen.ar(
       Env.perc(0.01,rrand(0.1,2.0)),
       SinOsc.ar(
          rrand(3.0,5.0)*1000,
          0, 0.1)
       )
     }, 1, nil, Dust.ar(4))
  })
)
```



Spawn-Objekte können auch verschachtelt werden, um Hierarchien von Ereignissen aufzubauen. Jedes gespawnte Event kann selbst einen oder mehrere Spawns enthalten, die ihrerseits eigene Events auslösen usw.



```
(
Synth.play({
  TSpawn.ar({
     var trans;
     trans = XLine.kr(500.0, 2000.0, 2);
     Spawn.ar({
        EnvGen.ar(
           Env.perc(0.01,rrand(0.1,1.0)),
           SinOsc.ar(
              rrand(3.0,5.0)*trans.poll,
              0, 0.1)
           )
        }, 1,
        // nextTime 20...120 ms
        { rrand(0.02, 0.12) },
        // 4 bis 20 Events
        rrand(4, 20))
     }, 1, nil, MouseX.kr(-1,1))
  })
)
```

Die Maus triggert beim Überfahren der Bildschirmmitte von links nach rechts ein neues `TSpawn`-Event, das zunächst ein `XLine` startet und dann einen `Spawn` aktiviert. Dieses `Spawn`-Objekt generiert zwischen 4 und 20 Events im Zeitabstand von 20 bis 120 ms. (*siehe Abbildung auf der linken Seite*) Die Tonhöhe liegt zwischen dem 3- bis 5-fachen des Momentanwertes von `trans`, d.h. der `XLine`-Steuerfunktion. (Der aktuelle Wert eines Control- oder Audiorate-Signals kann mit der Message `poll` gelesen werden.) Die Dauern sind ebenfalls zufällig; sie werden in der Hüllkurve `Env.perc` errechnet.

Voicer

Mit dieser Variante von `Spawn` kann SuperCollider fast wie ein herkömmlicher MIDI-Synthesizer benutzt werden. Der Klang entspricht der übergebenen ugenGraph function.

Ein Event wird über ankommende MIDI-Note-Messages auf dem angegebenen MIDI-Channel getriggert, wobei *NoteOff*-Messages das Event wieder beenden. Deshalb sollten hier Envelopes mit definiertem *release*-Knoten zur Anwendung gelangen, z.B. per `adsr` oder `asr` Message, ansonsten wäre die Tondauer unabhängig von der per MIDI gespielten Dauer.

Außerdem kann die „Polyphonie", d.h. die Anzahl der Stimmen vorgegeben werden. Wie üblich wird beim Überschreiten der maximalen Stimmenanzahl durch jede neue Note die jeweils älteste noch nicht beendete Note „gestohlen".

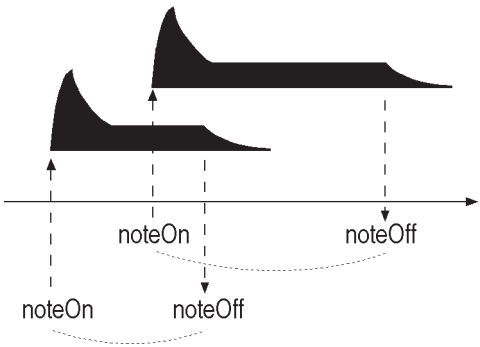
```
Voicer.ar(newEventFunc, numChannels,
        midiChannel, maxVoices, mul, add)
```

Die `newEventFunc` bekommt neben den üblichen 3 Argumenten `spawn`, `eventCount` und `synth` noch jeweils `deltaTime`, `channel`, `note` und `velocity` übergeben. Die hier offensichtlich nutzlose `deltaTime` (die Zeit bis zur nächsten Note ist unbekannt!) ist aus Kompatibilitätsgründen zu `OrcScore` eingefügt worden, damit die „Instrumente" in beiden `Spawn`-Varianten verwendet werden können.

Es folgt ein sehr einfaches Beispiel für einen 8-stimmigen `Voicer`, der auf MIDI-Note-Messages von Channel 1 reagiert.

```
(
e = Env.adsr(0.03,0.1,0.3,0.5,1,-3);
Synth.scope({
  Voicer.ar({
     arg voicer, i, synth, deltaTime,
          channel, note, vel;
     EnvGen.ar(e,
        Saw.ar(
             note.midicps,
             ((vel-127)/2).dbamp)
        )
     }, 1, 1, 8)
  })
)
```

Ein von `Voicer` gespawnter Ton bleibt hier solange aktiv, bis eine NoteOff-Message auf MIDI-Channel 1 eintrifft, die die Release-Phase von 0.5 Sekunden einleitet und mit deren Ende das Event und damit dessen UGens wieder freigibt.



Andere Spawn-Klassen

Neben den eben besprochenen existieren noch weitere Ableitungen von der Klasse `Spawn`. Sie alle unterscheiden sich vor allem dadurch, wie bzw. wodurch die Erzeugung von Events gesteuert wird:

`TSpawn`, `Voicer`, `TrigXFade`
- Eventsteuerung durch interne oder externe Trigger

`XFadeTexture`, `OverlapTexture`
- Events in gleichmäßigem Zeitabstand

`Cycle`, `RandomEvent`, `SelectEvent`, `OrcScore`
- Eventsteuerung durch Abarbeitung von Listen bzw. Selektion eines „Instruments" aus einem Array

Während für die meisten dieser Objekte in der `newEventFunc` ein Envelope-Generator zur Freigabe der in ihr enthalten UGens enthalten sein sollte, generieren die drei Klassen `TrigXFade`, `XFadeTexture` und `OverlapTexture` diese Envelopes je nach zu übergebender Crossfade- bzw. Transitionszeit selbst.

Auf diese Texture-Spawner sowie die anderen mit Listen operierenden Varianten, wie `Cycle` etc., soll hier nicht weiter eingegangen werden. Zu `OverlapTexture` gibt es zahlreiche Beispiele in den Example-Files und auch die anderen `Spawn`-Klassen sind in den Help-Files gut dokumentiert.

Forstsetzung folgt

Andre Bartetzki

Seit Mai 2002 ist SuperCollider eine freie Software und kann kostenlos von
`www.audiosynth.com`
heruntergeladen werden.

Diese **Version 2.2.16** ist gleichzeitig die letzte Version für MacOS 9 und wird nicht mehr weiterentwickelt werden.

Die von James McCartney bereits begonnene **Version 3d.5.1** für MacOS 9 weist einige Neuerungen auf, wie die Trennung von Audio- und Eventengine, die Möglichkeit, eigene PlugIns für SC zu schreiben, eine erweiterte GUI-Programmierung sowie Grafikein- und ausgabe. Leider wird diese Version ebenfalls nicht weiterentwickelt.

Die **neue Version 3** von SC wird auf nur auf MacOS X und höher laufen. Die Weiterentwicklung von SC wird jetzt von einem Team von Programmierern vorangetrieben. Zu diesem Zweck wurde ein SourceForge-Project eingerichtet und eine Developer-Mailing-Liste ins Leben gerufen:

`sourceforge.net/projects/supercollider`

`www.create.ucsb.edu/mailman/listinfo/sc-dev`

Eine Portierung von SC3 auf Linux ist in Arbeit.

SC3 für OSX weist eine von der Version 2 abweichende Syntax auf. Die betrifft vor allem die Synthesefunktionen. Die wichtigste Neuerung ist der neu konzipierte sc server, der von der eigentlichen Sprache und dem Editor sc lang abgekoppelt wurde, und auf dem die gesamte Klangsynthese stattfindet. Beide Programmkomponenten kommunizieren über OpenSound-Control (OSC), d.h. es ist jetzt möglich, SC in Netzwerken zu benutzen. Synthese-Patches, Synth-Definitions oder einzelne UGens werden nun mit sc lang programmiert und dann zur Ausführung per Netzwerkprotokoll an sc server übertragen.

Trotz der teilweise gravierenden Änderungen in der Funktionsweise und in der Sprache lohnt sich die Beschäftigung mit SC2 weiterhin, zumal sich Version 3 noch immer in Entwicklung befindet. Außerdem hat man unter MacOS 9 nur Zugang zur Version 2 bzw. zur Version 3d, die allerdings einige bugs aufweist.

Wie immer findet man weiterführende Hilfe unter:

`swiki.hfbk-hamburg.de:8888/MusicTechnology/6`

NINTH for Viola and MAX-MSP

Vortrag für das „9th Symposium for Art & Technology" am Connecticut College, New London (CT, USA) 2003.

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gara@folkwang-hochschule.de

An approach to Music's Dramaturgy with the interaction of technological devices. A composer's review of „NINTH (music for viola & computer)" (2002)

Introduction

My principal concern while composing a piece of music is its ultimate perception. Here some questions about this subject:

- How does the relationship "creator - receptor" in music work?
- How does the receptor perceive a piece of music?
- What happens in his mind?
- What type of effect does the creator like to produce in the audience through a music composition?

Including technological devices into the creation and performance of music, technology may constitute itself as a way of artistic expression, coexisting with traditional aesthetics principles. If this happens, a composer has to make some kind of reflection about how the audience perceives technology. Here two possibilities:

1. The audience perceives the dramatic of the work as a WHOLE or
2. Technology does create a new space in the perception, where it is possible to understand different level of dramatics during a musical piece performance.

With my final Diploma dissertation at the Folkwang Hochschule Essen (Germany) some years ago, I tried to categorize and systematize how music could be conceived and perceived, independently of what kind of music should be taken into consideration. The common denominator is here the music's dramaturgy.

With the uninterrupted and quick development of always-new ways of expression coming from the technological side, I ask myself if we should not begin to think about absolutely new aesthetics in the new multimedia times.

Let me clear up very quickly my point of view beginning with the meaning of the word:

Dramaturgy: (*from the greek. dramatourgía*) means: theory of the external construction form of a DRAMA and the laws of it's inner structure, and the word:

Drama (*from the greek. drâma*) means: series of exciting events.

Music happens along time, it is an „on going process" (and if we analyze it from the SUBJECTIVE point of view, time should be here a relative value). If we take a look to the definition of Drama, we cannot ignore here the word „EVENT". An event is an „on going process" too. The structure of every event is perceived by the „receptor" and is saved in his memory as a certain amount of information regarding the contemplated event (for example his own conception, his own „mental" snapshots, etc). This structure is the „dramaturgy" of the event. If we consider now that music is in fact an event, the description above for Drama should be also applied to music.

NINTH (music for Viola & computer). Short description

In order to illustrate with one possible example my conception of dramatic interaction between technology and music, I'd like to introduce my piece „Ninth".

NINTH is a 12 minutes long piece involving only one viola and a computer, both interacting without any kind of other electronic devices.

The compositional materials (sounds, rhythms and pitches) are taken from the third movement - *Adagio*- of Anton Bruckner's *9th Symphony in D minor*. The composition for the viola part was worked with advanced techniques and mostly all the pitches are played as flageolet (natural harmonics) sounds [*see FIGURE 1*], which has also a direct relation with the kind of live-electronics wanted for the piece.

The computer part of „NINTH (music for Viola & Computer)", was fully programmed with MAX-MSP. This is a DSP software developed by D. Zicarelli for the Macintosh environment, following the IRCAM ISPW (Ircam Signal Processing Workstation), which worked together in the 90's with Opcode's MAX on the Next Computers. MAX-MSP uses the so called patches, which are a combination of different objects, which have all different names and functions. There is a slight difference between MAX alone Objects (mostly used for MIDI and sequencing applications) and the MSP objects: the latter add a tilde (~) after the name, and are able to pass a DSP signal from one object to another. MAX objects, on the other side, can only pass normal data (including MIDI data).

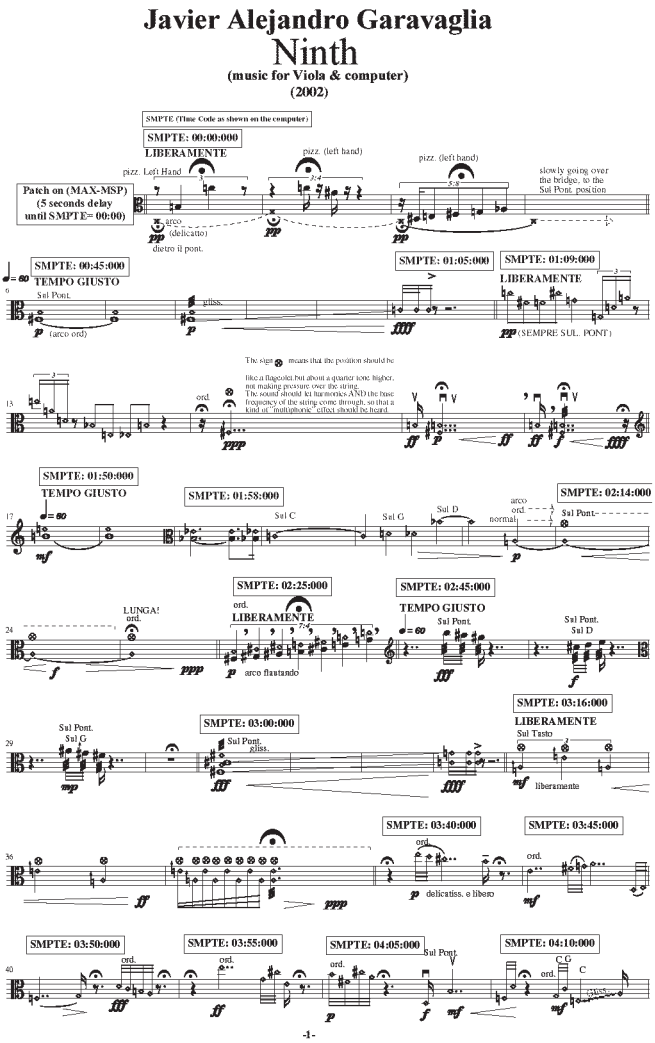


FIGURE 1 - First page of the Score of „NINTH (music for Viola & computer)“

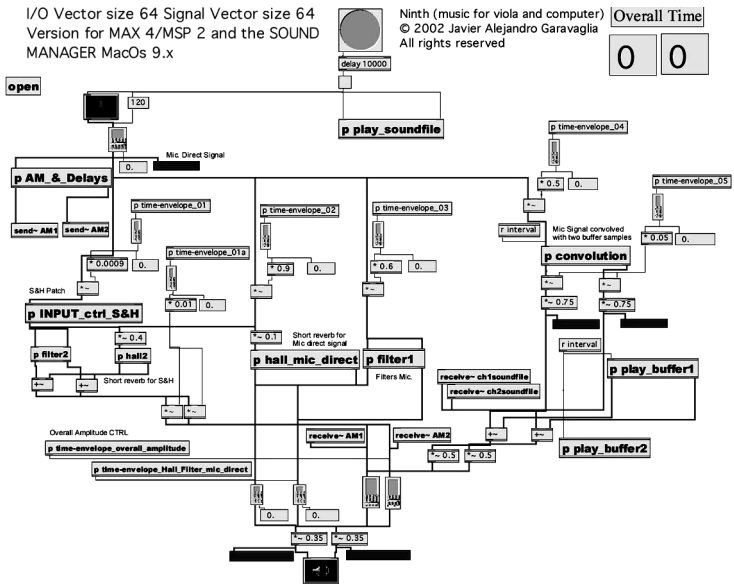


FIGURE 2 - Main MAX-MSP Patch for „NINTH (music for Viola & computer)“

The MAX-MSP main patch for NINTH [*see FIGURE 2*] has several instruments, which make different signal processing routines, like filtering, a particular sample & hold type designed by me for this piece (triggered by the amplitude of the input coming from the viola), convolution, dynamic delays or amplitude modulation (all interacting with each other). Two samples stored on the hard drive of the computer, originally taken from the F# dominant chord on bar 17 of the general score of Bruckner's symphony, interact also with the viola and the developed MAX-MSP instruments within the patch. Both samples were previously modified through a time stretching treatment (phase vocoding) and slightly varying in its pitch.

The form of the piece, like Bruckner's Adagio, is a kind of ABAB like-form with a Coda. The title „Ninth“ recalls not only Bruckner's symphony, but also the initial interval of its third movement (a minor ninth), that structures the whole movement.

Bruckner's 9th Symphony (D minor)
3rd Movement: Adagio (E major)

The choice of this symphony has personal connotations, because this work is one of my favorite pieces of music. The kind of spiritual highness that Bruckner intended to reach in his life and music is transparently evident in this moment. The main thematic feature is the interval of a minor ninth (b natural to c natural) at the beginning of the movement that has (at least for me) the dramatical tension of recalling „longing“. The central emotional focus of the movement lays on an F# dominant chord (II degree of the main tonality - that is the dominant of the dominant) on bars 17 to 19 (with 7th and 9th, plus and aggregated 4th, the last both resolving in the A# at the end), which is repeated on bar 121 to 123, this time a semitone higher - on G- with an almost identical orchestration. All 4 horns in F play the 9th interval melodically (f# and g#) the first time (and g and a the second time) during this chord. You can see this on the next graphic [*see FIGURE 3*].

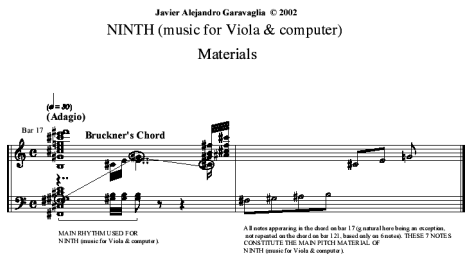


FIGURE 3 - Bruckner's F# chord
(9th Symphony - 3rd Movement. BAR 17).

On the right side, the essential notes of the chord are extracted and serve as basic material for NINTH

The melodic 9th interval is the main material, developing the whole thematic from it (and it is the 9th symphony indeed!). A very curious thing is, that the first chord (F#) has both ninths in it (minor and major, that means G# and G, this last only on the clarinet). The second chord has only the major 9th (in this case an A). Because of this double use of minor AND major ninth in this chord, is that I decided to use only the first version of it for my piece. The rhythmic distribution of the melodic interval of ninth in this case is => long note (1x quarter note plus 1x eighth and plus 1x sixteenth) and two short rhythms (2x thirtyseconds). This Pattern - ONE long note followed by TWO short ones -, is recurrently used in my piece also [s*ee FIGURE 1*].

Technical description of the MAX-MSP main patch and subpatches (instruments) in NINTH.

The main patch in NINTH was conceived to be operated on the stage by the performer himself (the main ground being, that I like to play the piece myself). Because the player needs his hands almost the whole time on the instrument, he is not in the position to make changes on the computer while the piece is running. This fact added to the reason that I do not like (and this is only a personal decision) someone operating the computer during the performance, mostly because the complexity of the patch requires some time to get along with it, what normally doesn't happen during hectic performance and rehearsal times. Taking this into account, only pressing a button (BANG) on the patch, delayed 10 seconds, so that the performer may take the initial position is the only operation that is needed to perform the piece. From then on, there are several time envelopes crossfading the entrance or exit of the different DSP processes (the instruments or subpatches) during the piece.

The first processes taking place are also the only ones taking place from the beginning to the end:

[Subpatch hall_mic_direct]

a short stereo reverb with 40 milliseconds on the right output and 50 milliseconds on the left one, with a dynamic Feedback value oscillating between 40% and 75%, going inverse on both channels

[Subpatch Play_soundfile]

reading a sound file (sample) stored on the hard drive, which will also be active from the beginning till the end. This is a mono file, for which a special panning in MAX-MSP was programmed. The original sample is a recording of the F# dominant chord on bar 17. This was stretched in its length in two files: one up to 40 times and the other up to 20. These two files were then processed with cross synthesis and after that varied in its pitch very slowly (resulting in a very long, imperceptible "glissando") with a total duration of 11 minutes and 22 seconds.

[Subpatch Filter1]

a dynamic resonance filter, where the central frequency and the Q values vary constantly and differently on both channels.

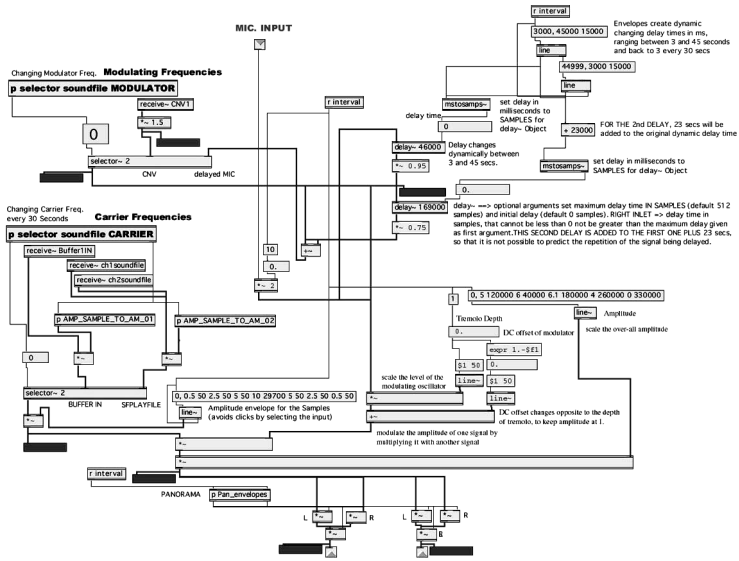
[Subpatch play_buffer1]

a short varied version of the first sample will be loaded in the memory and looped, panned, transposed and read forwards and backwards.

[Subpatch play_buffer2]

another short varied version of the first sample will be loaded in the memory and looped, panned, transposed and read forwards and backwards.

The two BUFFER subpatches are needed for an interaction between themselves and the Viola input signal in some of the next operations. The subpatches that produce the main live-electronics in NINTH are:



[FIGURE. 4 - MAX-MSP SUBPATCH AM_&:DELAYS for "NINTH (music for Viola & computer")]

[Subpatch AM_&_DELAYS]

used for imitation a repetition of live sounds. AM means here *amplitude modulation*, that is, the multiplication of signals (sample by sample) in the time domain. The 2 carrier frequencies for these patch are selected every 30 seconds between the main sample on the hard disc (coming from the [subpatch Play_soundfile]) and the buffer N° 1. The modulator frequencies on the other side are the direct INPUT from the viola OR the convolution output being selected every 22 or 55 seconds respectively. In the case of the direct microphone INPUT, two delay lines were programmed. Time envelopes creating dynamic changing delay times, ranging between 3 and 45 seconds and back to 3 every 30 seconds, make the first delay pass to be hold almost randomly between these limits. The 2nd delay pass is added to the first with the same range of delay time plus 23 seconds, so that it is not possible to predict the repetition time of the signal already delayed on the first pass. The second delay takes a different amount of Samples to delay than the 1st one. This and the fact that this modulator is not always active (because it alternates with the convolved signal, explained in the next subpatch), makes the repetition of these AM seem extraordinary randomized and surprising also in the timbre, because the carrier frequencies also switch every 30 seconds. This subpatch is present almost the whole time, being more predominant towards the middle of the piece, and fading out very slowly to the end. [*seeFIGURE 4*]

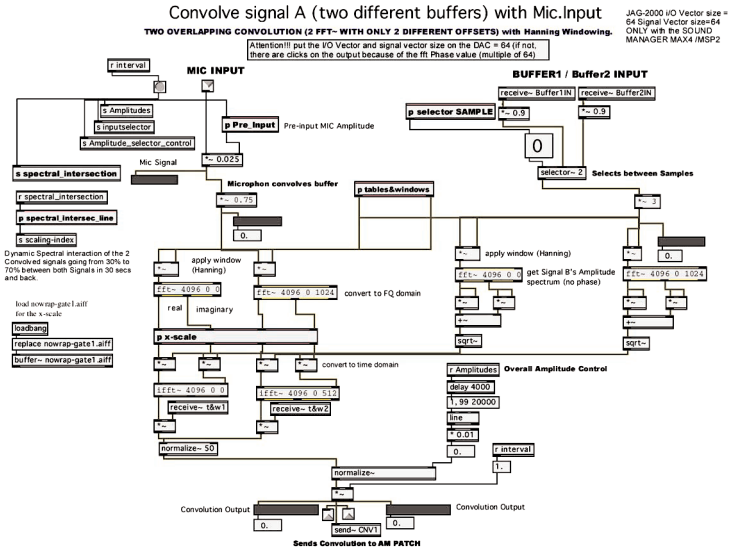


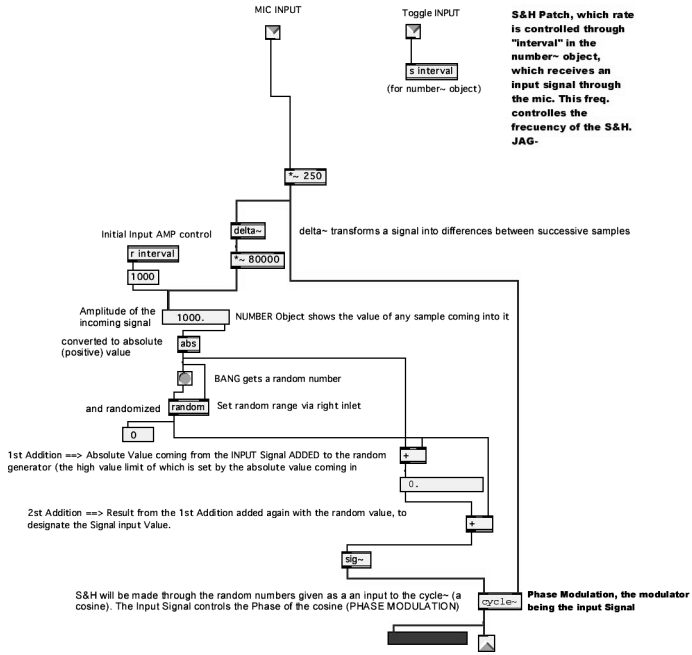
FIGURE. 5 - MAX-MSP SUBPATCH CONVOLUTION for „NINTH (music for Viola & computer)“

[Subpatch Convolution]

the 2 buffer samples stored in the memory under the subpatches play_buffer1 and play_buffer2 are used as the input for one of the signals to be convolved. *Convolution* is a real time analysis and multiplication of the spectral contents of the incoming signals (in this case, N° 1 being the viola, N° 2 one of the samples) through FFT and IFFT (Fast Fourier Transformation and Inverse Fast Fourier Transformation) and is the equivalent to AM in the frequency domain. Because convolution takes a very intensive calculation process (showed on the CPU utilization) and in order not to overload the real time processes, I used only two overlap convolution That means that the "slices" of sound to be analyzed are shifted only once in the windowing analysis. The convolution process begins at minute 2:00 and will be very slowly faded out till the end of the piece. The period going from minute 2 to minute 5 are the most relevant for the convolution in NINTH. [*see FIGURE 5*]

[Subpatch INPUT_ctrl_S&H]

begins working first at minute 6:42. At this time, an envelope lets the viola signal go through the patch, triggering a lot of high frequencies as usual by the procedure called „Sample and Hold“. S&H is a normal electro- acoustic procedure, which „retains“ some random numbers (usually generated by a noise generator) a short moment of time (this rate - which can also be randomized, being given by the user), till another number will be selected. The output is usual a FM. In this case, I designed a phase modulated random generation. The input signal coming from the viola modulates the phase of the frequency values coming into the oscillator. This values are taken from randomized numbers coming from the number~ object (which reads the value of the samples coming in). The effect, mostly with the high harmonics (and depending of the intensity with which they are played) of the viola part, is that of high metallic notes. This subpatch is the main one in the second half of the piece. [*see FIGURE 6*]



[FIGURE. 6 - MAX-MSP SUBPATCH INPUT_ctrl_S&H for "NINTH (music for Viola & computer")]

Conclusion

Coming back to the aesthetic point of this paper, the dramatic of this piece is very different in its aesthetics to Bruckner's work, though it may be very similar in the kind of emotions it might awake in the audience, in spite of the use of technology.

From my point of view, the challenge composing pieces like this - in which technology overtakes a musical and aesthetic role - is to combine the music you want to compose with the real-time computer processes you want to program, in order to sacrifice none of the main dramatic ideals.

In the case of NINTH, the resulting dramaturgy would not have been possible, if these two different worlds hadn't been able to work together. And the effect upon the „audience" might not be achieved using other means BUT technology. And I still think, that there are two parallel and different kind of dramatics taking place and interacting. You may judge these statements listening to the piece during the present festival.

NINTH (music for Viola & computer) Technical Description

- Duration: ca. 12 minutes.
- Viola with contact microphone (input direct in the computer)
- Apple PowerBook (minimum G3 500)
- Stereo output (sound manager or digital interface) A multi-track version up to 8-tracks is also planned, but not ready.
- Diffusion for at least 4 channels (better 6) and somebody in charge of the diffusion on the console.

icem-www.folkwang-hochschule.de/~gara

K A L E N D E R

bis 9.3.	**Ausstellung** Akademie der Künste, Berlin	Mediale Anagramme, Werkschau der Medienkünstlerin Valie Export www.kunstcoop.de
1. - 5.2.	**transmediale03** Haus der Kulturen der Welt, Berlin	Internationales Medienkunstfestival Kongreß, Award, Performances, Installationen www.transmediale.de
31.1. - 8.2.	**club transmediale.03** Maria am Ufer und Podewil, Berlin	festival for electronic music and related visual arts www.clubtransmediale.de
3.2.	**Labor Sonor** KuLe Auguststr., Berlin	Konzert, u.a. Werke von Ablinger, Holliger, Reese mit Kirsten Reese, Flöte/Laptop
4. + 5.2.	**Studiokonzert** ZKM-Kubus, Karlsruhe	Tanz, Video, Tape, Live-Elektronik Werke aus der Hochschule für Musik Karlsruhe www.hfm-karlsruhe
6. - 9.2.	**Eclat 2003** Theaterhaus Wangen	Festival Neue Musik Stuttgart, Veranstalter: Musik der Jahrhunderte www.mdjstuttgart.de
7. - 22.2.	**6th Annual Activating the Medium Festival** San Francisco	ACTIVATING ARCHITECTURE: The physical properties of sound and its occupation of time and space declare one of the most challenging elements that separates the medium of sound from other art forms. This condition has inspired a basis from which sound artists realize, generate and structure experience - where the fundamentals of acoustics and the interconnection between sound and space become the principle dialogue. u.a. Installationen von und Talks mit Christina Kubisch
7. - 9.2.	**Hörkunstfestival 2003** Markgrafentheater Erlangen	u.a. Installationen und Klangperformances von Werner Cee, Thomas Gerwin, Tilman Küntzel www.hoerkunst.de
12. - 16.2.	**Tanzperformance** Theater am Halleschen Ufer, Berlin	cie. toula limnaios „outre vie" Tanz, Musik, Video, Licht
13. - 23.2.	**Sonic Light 2003** Paradiso, Amsterdam	composed light, articulated space The festival will comprise a week of film presentations, a three-day conference, a small exhibition and three evenings of live music and light projections. www.sonicacts.com
14. + 15.2.	**Musiktheater** Werkstatt der Kulturen, Berlin	Vinko Globokar „Les Emigrés", mit dem Ensemble United Berlin www.unitedberlin.de
16. - 22.2.	**Stockholm New Music** www.rikskonserter.se	As before, its aim is to present an international arena for avant garde music. The focus this time is on the point of interaction between composer and audience, the link to which of course is the performer. The interaction between the performer and the composer and their various forms of relationship is the theme of the festival.
17.2.	**Portraitkonzert** Hochschule für Musik und Theater Hamburg	Georg Hajdu , Werke mit Instrumentalsolisten und Elektronik www.georghajdu.de
26.2.	**Musica Viva** Muffathalle, München	Stücke für Streichquartett plus ..., „Klangmaschine Pressluftgeiger" www.brnet.de
27.2. - 1.3.	**9th Biennial Symposium on Arts and Technology** Ammerman Center for Arts and Technology, Connecticut College, New London	Theme: Transparent Technologies. The symposium will consist of paper sessions, panel discussions, art exhibitions, interactive environments, music concerts, animations, mixed media works, video screenings, dance, experimental theater and scientific visualization. u.a. Javier A. Garavaglia (ICEM) „NINTH (music for Viola & computer)" cat.conncoll.edu

28.2.	**Nachtstudio Multimedial** Nikolaisaal, Potsdam	Uraufführungen zu Kurzfilmen aus der Hochschule für Film und Fernsehen mit Musik von Zapf, Glandien, Rubbert, Newski, Beil, Winkler, Stier, Wertmüller, Simon, Pregler veranstaltet von der Akademie der Künste, Konzeption Georg Katzer
28.2. - 9.3.	**Musica nova Helsinki**	www.musicanova.fi
29. - 30.2.	**week-end Pierre Henry** Maison de Radio France, Paris	4 Konzerte mit dem GRM-Acousmonium www.ina.fr/grm
1. - 11.3.	**New Music Festival** Montreal	The Société de Musique Contemporaine du Québec (SMCQ) Of the more than fifty contemporary composers whose works will be performed during the Montreal/New Music Festival we should mention George Antheil, Jean-Philippe Bec, Bélà Bartók, Cornelis de Bondt, Ned Bouhalassa, Brian Cherney, Dmitri Shostakovitch, Yves Daoust, Francis Dhomont, Louis Dufort, José Evangelista, Morton Feldman, Sean Ferguson, Sofia Goubaïdoulina, Georg Friedrich Haas, Joane Hétu, Michael Jarrel, Monique Jean, Bernhard Lang, Jean-François Laporte, Robert M. Lepage, Jean Lesage, Gyorgy Ligeti, Michel Longtin, Luigi Nono, Yannick Plamondon, Serge Provost, Alexandre Rastakov, Wolfgang Rihm, André Ristic, John Rea, R. Murray Schafer, Paul Steenhuisen, Alain Thibault, Klas Torstensson and Edgar Varèse.
3.3.	**Konzert** College of Music Berklee, Boston	Doppelportraitkonzert mit Stücken von Richard Boulanger und Javier A. Garavaglia.
6.3.	**Konzert** Tonhalle Düsseldorf	Konzert der musikFabrik mit Werken für Streicher und Elektronik von Gordon, Crumb, Reich www.musikFabriknrw.de
7,14,21+ 28.3. + 4.4.	**Concert Series** Institute of Contemporary Arts, London www.sonicartsnetwork.org	Sonic Arts Network and BBC Invitation Concerts Five nights of electronic audio, music and sonic art live on stage, and broadcast nationally on BBC Radio 3. Featuring Chris Watson, Marie Goyette, People Like Us, Farmer's Manual, Christian Calon, Charles Amirkhanian, Trevor Wishart, Janek Schaeffer and others.
8.3. - 21.4.	**Installation** Stadtgalerie Saarbrücken	Arnold Dreyblatt Multimediale Installationen
9.3.	**Konzert** Fort Malakoff, Mainz	das duo archaeopteryx und Harald Muenz spielen Stücke von Bernfried Pröve, Georg Nussbaumer, Harald Muenz und Matthew Burtner
13. - 23.3.	**MaerzMusik** Berlin	Festival für aktuelle Musik, Schwerpunkt Baltische Länder neue Orchester- und Kammermusik, interdisziplinäre und Medienkunst, Musiktheater, Klanginstallationen www.maerzmusik.de
14.3.	**Konzert** DLF Köln	Maria de Alvear „Flores" für Stimmen, Trompete, Ensemble, Elektronik und Video mit der musikFabrik www.musikFabriknrw.de
18. - 22.3.	**Les journées Grame** Lyon www.grame.fr	The second edition of "Les journées Grame" is particularly focused on artistic and scientific productions created by Grame, including several world first-night performances ("concert with live electronics, mixed-media spectacles etc) and presentations of the developments made by the research laboratory for computer music, work-shops focusing on the role of the musician interpreting interactive music.
19. - 23.3.	**?... Acoustic Ecology ...?** Victorian College of the Arts, Melbourne www.afae.org.au	World Forum for Acoustic Ecology (WFAE) presents an International Symposium Main themes: ENVIRONMENT - bioacoustics, national parks, field recording natural soundscape TECHNOLOGY - audio industry, digital media, virtual reality constructed soundscape EDUCATION - pedagogy, resources, public programmes considered soundscape CULTURE - history, sound art, language, indigenous people human soundscape DESIGN - architecture, urban design, sound design, designed soundscape
21.3.	**Konzert** Theatre Hall, Rousse	Konzert mit Werken für Bläser und Elektronik von Spassov, Stockhausen, Szeghy, Mahnkopf www.musikFabriknrw.de
28.3.	**Musica Viva** Gasteig, München	u.a. neue Werke von Jean-Claude Risset und Peter Ablinger

29.3. - 24.4.	**Ausstellung** KunstRaum Berlin + abbraccio Galerie Berlin www.kunstraum-berlin.de	Thomas Gerwin „Klang im Raum", Klangskulpturen und RaumKlang-Installationen 29.3. Vernissage: Performance mit Live-Elektronik 24.4. Finissage: Performance mit Live-Elektronik
30.3. - 6.4.	**Festival Archipel** Genf www.archipel.org	Featuring: American minimalism serie: Alvin Lucier, Tom Johnson, James Tenney, Phill Niblock - Sound Installations: Akio Suzuki, Robin Minard, collective project "Grenzenlose Freiheit", Rudy Decelière & Manuel Schmalstieg, Alvin Lucier - Electro acoustic: François Bayle, Michèle Bokanowski, Christine Groult, Natasha Barrett - Two concerts portraits around Luigi Nono and Rebecca Saunders, Improvisation, etc..
3.4.	**Gesprächskonzert** Karl-Rahner-Akademie, Köln	„objets trouvés", instrumentale, vokale, radiophone und elektroakustische Werke von Harald Münz www.haraldmuenz.de
3. - 5.4.	**Twelfth Annual Florida Electroacoustic Music Festival** University of Florida, Gainesville, Florida	Composer-in-Residence, James Dashow (Italy/USA) emu.music.ufl.edu/
3.4.	**Konzert** Westbad in Gießen	Werner Cee „Abdrift - elektroakustische Landschaften" Live Konzert im Schwimmbad (mit Badebetrieb)
4.4.	**Portraitkonzert** Kunst-Station St. Peter, Köln	„kommunizierende AnsatzRohre" Werke von und mit Harald Münz
4.4. 23 Uhr	**Radiokunst** Hessischer Rundfunk, hr2	Harald Muenz: po Îejanski (2002; Ursendung), radiophone Komposition Kompositionsauftrag des Hessischen Rundfunks
4. - 12.4.	**Music Biennale Zagreb**	International festival of contemporary music www.biennale-zagreb.hr
10. - 13.4.	**MAXIS 2003** Centre for Scientific Research in Music (ICSRiM), School of Music, University of Leeds, West Yorkshire, Leeds	2nd International Festival/Symposium of Sound and Experimental Music Theme: "Alternative, Aesthetic and Technologic Issues Pertinent to Sound" info@maxis.org.uk www.maxis.org.uk
11. - 17.4.	**Música Viva** Coimbra www.misomusic.com	International Festival, Relations between Music and Science. Courses in Max/MSP and other advanced new technologies for computer music; Master classes in composition; performances by Portuguese and foreign soloists and ensembles. The first Portuguese "loudspeaker orchestra" is one of the attractions of the festival.
12.4.	**Radiokunst** Westdeutscher Rundfunk, WDR 3	Porträt Harald Muenz, Mitschnitt von einem Porträtkonzert am 4.4.2003 www.haraldmuenz.de
14.4.	**acousmatique** Maison de Radio France, Paris	2 Konzerte mit dem GRM-Acousmonium, Werke von Capelle, Anastas, Kahn, Giomi, Thomas, Graton, Ruetch, Mary, Adkins www.ina.fr/grm
15.4.	**live electronics** Maison de Radio France, Paris	GRM-Konzert mit Stücken für Ensemble und Elektronik Werke von Nillni, Bashet, Haddad, Racot, Vaggione
15. - 17.4.	**Gesture Workshop 2003** InfoMus Lab - DIST, University of Genova	The 5th International Workshop on Gesture and Sign Language based Human-Computer Interaction infomus.dist.unige.it/GW2003
18.4.	**Performance** Museum-Kunst-Palast Düsseldorf	Werner Cee „Elegien", Raumklanginszenierung des gleichnamigen Hörstückes. WDR. mit Martin Speicher, sax
18. - 20.4.	**Two Days and Two Nights of New Music** Odessa	The 9th International Festival of Modern Art, Odessa, Ukraine. The Festival promotes all trends of vanguard, modern and post-modern music, including live-electronics, taped and / or computer music. www.anm.odessa.ua
22.4. 23 Uhr	**Radiokunst** HR 2 / Hessischer Rundfunk Frankfurt	Thomas Gerwin „Die Quelle im geschlossenen Tal" (2002) Soundscape Composition www.hr-online.de/hf/hr2/hoerspiel/q2

29.4. - 5.5.	**Sonorities** Belfast	Festival of Contemporary Music Electro-acoustic music, poetry reading, and films. Much new music from Australia and New Zealand and by Irish composers. www.sonorities.org.uk
6.5.	**Musica Viva** Gasteig, München	u.a. Roger Reynolds „...brain ablaze .. she howled aloud" für 3 Piccoloflöten und Live-Elektronik
6.5. - 24.7.	**Ausstellung** Katholischen Akademie der Erzdiözese Freiburg	„Still-Leben" Soundscape-Kompositionen von Thomas Gerwin und Photographien von Telemach Wiesinger www.katholische-akademie-freiburg
7. - 11.5.	**Open Ears** Kanada	Festival of Music and Sound, a new mix of concerts, electroacoustics, sound installations, symposia and workshops. www.openears.ca
8. - 10.5.	**XIV CIM 2003** Centro Tempo Reale, Florenz	Colloquium on Musical Informatics, Computer Music: Past and Future www.xivcim.org www.centrotemporeale. it
17.5.	**Performance** Werkstatt der Kulturen, Berlin	Yueyang Wang: Live Performance und Klanginstallation „3 Chinesen mit dem Kontrabass" und Klang-Tanz-DVD „3einigkeit"
18.5.	**Performance** Kathedrale Notre Dame, St Lô, Normandie	Hans Mittendorf: „In saecula saeculorum" Multimedia Performance für 4 Soprane, Live-electronics für sound und Video.
19.5.	**Montags-Konzert** BKA Mehringer Damm, Berlin	Elektroakustische Komposition für 5.1 Lautsprecher und Video-Projektion + Werke von Thomas Gerwin und Martin Daske - in Kooperation mit dem "BERLIN LOUDSPEAKER ORCHESTRA" und FÖRDERBAND e.V. Berlin www.unerhoerte-musik.de
22. - 24.5.	**NIME 03** Faculty of Music - McGill University, Montreal	International Conference on New Interfaces for Musical Expression The conference will consist of a three full-day event where research papers, demos and performances will be presented that correspond to the state-of-the-art concerning new interfaces for musical expression. www.nime.org
23. - 25.5.	**Subtle Technologies** University of Toronto	This multidisciplinary event invites artists, scientists, technologists and theorists to discuss, demonstrate and exhibit their work. www.subtletechnologies.com
24.5.	**multimedia** Maison de Radio France, Paris	Konzertperformance von Beatriz Ferreyra, Pjilippe Mion, David Jisse www.ina.fr/grm
25.5.	**concert-vidéo** Maison de Radio France, Paris	Michel Chion „La messe de terre"
25.5. - 1.6.	**25. Internationales Seminar für zeitgenössische Musik** Fortbildungszentrum für Neue Musik Lüneburg	Schwerpunkt Live-Elektronik, Instrument und Elektronik www.neue-musik-lueneburg.de
26.5.	**live electronics** Maison de Radio France, Paris	GRM-Konzert mit Stücken für Tasteninstrumente und Elektronik von Spiteri und Levaillant
26.. - 27.5.	**CMMR 2003** Montpellier	1st International Symposium on Computer Music Modeling and Retrieval www.cs.aue.auc.dk/cmmr2003
28.5. - 1.6.	**mutek 2003** Montreal	Music, Sound and New Technologies www.mutek.ca
3. - 9.6.	**IMPAKT 2003** Central Museum, Utrecht	Festival für Film und neue Medien www.impakt.nl

3. - 5.6.	**Musiques & Recherches** Chapelle de Boendael, Brüssel	Electroacoustic Concerts with among others Luigi Ceccarelli www.musiques-recherches.be
4.6. 22 Uhr	**Radiokunst** Sender Freies Berlin	„Geometrie des Klangs“ (2001) Radiophone Komposition für Lautsprecherorchester von Thomas Gerwin
8.6. 0.05 Uhr	**Radiokunst** DeutschlandRadio Berlin	„Metamorphosen“ (2003) Ursendung, Radiophone Text-Raum-Komposition von Thomas Gerwin
16. - 22.6.	**Musica Scienza 2003** Centro Ricerche Musicali, Rom	International Forum of Music, Science and Contemporary Culture. The Forum will include the following events: Multimedia performances, Electroacoustic music, Sound Art Installations, Design of the acoustic space: Holophony. www.crm-music.org
20.6. - 6.7.	**New Music Indaba** Grahamstown + Johannesburg	Konzerte und Komponistenworkshops u.a. Konzerte mit elektronischer Musik sowie Aufführungen von Werken Stockhausens www.newmusicsa.org.za
24.6. - 4.7.	**Klanginstallation** Deutzer Rheinbrücke, Köln	im Rahmen des „Romanischen Sommers“: Harald Muenz: FugaCittà (2003), Sprach-Klanginstallation im Innern der Deutzer Brücke
27. - 29.6.	**XI. Randspiele** St.Annen-Kirche, Zepernick	www.randspiele.de
4. - 6.7.	**Scarborough Electroacoustics 2003** Creative Music Technology, University of Hull, Scarborough	The conference's aim is to explore electroacoustic music through interdiscplinary, practical, and aesthetic concerns. www.hull.ac.uk/cmt/sea03
24. - 27.7.	**New Forms Festival 2003** Vancouver	The theme for 2003 is „inter[se/ac]tion“ www.newformsfestival.com
6. - 8.8.	**IX Brazilian Symposium on Computer Music** University of Campinas	Symposium Theme: Music As Emergent Behaviour www.ic.unicamp.br/sbc2003
9. - 17.8.	**Stockhausen-Kurse** Kürten	Konzerte, Interpretationskurse, Kompositionsseminare und Vorträge zum Werk von Karlheinz Stockhausen www.stockhausen.org
11. - 31.8.	**Ostrava Days 2003** www.ocnmh.cz	Summer Institute for Composers and Performers Public Performances of New Music, August 25-30.
3. - 7.9.	**Mittwoch aus LICHT** Bern	Uraufführung der 6. Oper Stockhausens aus dem Zyklus LICHT zur Biennale Bern HMT, Papiermühlestr. 13a, 3000 Bern 22, Switzerland, Tel.: +41-31 634 93 51; facs: +41-31 634 93 90 office@hmt.bfh.ch www.freie-akademie.ch www.biennale-bern.ch
6. - 11.9.	**Ars Electronica 2003** Linz	Festival für Kunst, Technologie und Gesellschaft
8. - 12.9.	**6th International Workshop in Digital Audio Effects, DAFx03** Queen Mary, University of London	organised by the Digital Music Laboratory of the Department of Electronic Engineering www.elec.qmul.ac.uk/dafx03
15. - 17.9.	**Wedelmusic** University of Leeds	3rd International Conference on Web Delivering of Music www.wedelmusic.org
17. - 18.9.	**Interactive MUSICNETWORK Open Workshop 2003** University of Leeds	MusicNetwork is a European Commission supported thematic networking project. MusicNetwork aims to bring the music industry, content providers and research institutions together, to draw on the assets and mutual interests of these actors to exploit the potential of new technologies, tools, products, formats and models. www.interactivemusicnetwork.org musicnetwork@dsi.unifi.it

19. - 27.9.	**Warschauer Herbst** **46. International Festival Of Contemporary Music**	u.a. multimediale und elektroakustische Konzerte z.B. Konzert „flute & electronics" mit Carin Levine, Konzert mit dem Experimantalstudio der Strobel-Stiftung www.warsaw-autumn.art.pl
26.9. - 3.10.	**Weltmusiktage 2003 der IGNM** Slovenien	www.iscm.nl www.wmd2003.s5.net
29.9. - 4.10.	**ICMC 2003** Singapor	„Boundaryless music" www.icmc2003.org
12. - 19.10.	**29. Festival Neue Musik** Fortbildungszentrum für Neue Musik Lüneburg	www.neue-musik-lueneburg.de
15. - 17.10.	**Conference Electroacoustic Musics** Pompidou Centre, Paris resonances2003.ircam.fr	Part of Résonances 2003, an international meeting concerning music and technology organised by Ircam, this conference is organised in collaboration with De Montfort (UK) and the Sorbonne (F) universities et de la Sorbonne, INA/GRM, the Musée de la Musique (Paris) and the Electronic Music Foundation.
17. - 19.10.	**Donaueschinger Musiktage**	Titel "Hintergrund und Ereignis - InVersionen" www.swr.de/swr2/donaueschingen
6. - 9.11.	**4th Festival of Contemporary Music Luigi Nono** Triest	Associazione „Musica Libera" www.musicalibera.it

2004

3. - 12.11.	**Weltmusiktage 2003 der IGNM** Schweiz	www.iscm.nl

Andre Bartetzki

Deutsche Gesellschaft für Elektroakustische Musik e. V. (DEGEM)

Die „Deutsche Gesellschaft für Elektroakustische Musik“ (DEGEM) ist Mitglied im Deutschen Musikrat und in der GNM. Sie wurde am 26. April 1991 als „DecimE“ (Deutsche Sektion der CIME ["Confédération Internationale de Musique Electroacoustique"]) in Berlin gegründet und gehörte zwischenzeitlich der NICE (New International Community of Electroacoustic Music) an.

Die DEGEM fördert die elektroakustische Musik in nationalem und internationalem Rahmen. Diesem Zweck dienen die Organisation von Fachtagungen, -kursen und Konzerten, der internationale Austausch von Informationen sowie die Herausgabe von Publikationen und Tonträgern. Insbesondere wurde ein Archiv in Zusammenarbeit mit dem ZKM Karlsruhe aufgebaut, in dem in Deutschland entstandene bzw. erdachte Produktionen Elektroakustischer Musik erstmals gesammelt und öffentlich zugänglich gemacht werden.

Die DEGEM ist selbstlos tätig und verfolgt ausschließlich gemeinnützige Zwecke. Sie finanziert sich hauptsächlich aus Mitgliedsbeiträgen und Spenden.

Aufnahme in die DEGEM können Personen und Institutionen beantragen, insbesondere Komponisten, Musikwissenschaftler, Tonmeister und Tontechniker, Interpreten, Ensembles, Studios sowie entsprechende Institutionen und Veranstalter aus dem In- und Ausland. Damit sollen alle Menschen erreicht werden, die elektroakustische Musik komponieren, interpretieren, lehren, lernen, erforschen, aufführen, organisieren und verbreiten.

Die DEGEM hat gegenwärtig ca. 150 Mitglieder, darunter 8 Institutionen.

Publikationen:

- "Internationale Dokumentation Elektroakustischer Musik" (18000 Werke, 380 Studios, 450 S.). Erstauflage 1992. Neuauflage Herbst 1996 im Pfau-Verlag Saarbrücken, Auch als Diskettenversion erhältlich.
- "Die Analyse elektroakustischer Musik - eine Herausforderung an die Musikwissenschaft?". Beiträge von Klaus Ebbeke, Gottfried Michael Koenig, Elena Ungeheuer, Dirk Reith, Kai-Erik Ziegenrücker, André Ruschkowski, Jürg Stenzl und Thomas Nagel. Erhältlich über Pfau-Verlag Saarbrücken
- Vierteljährliche Mitteilungen mit Informationen aus allen Bereichen der EM einschließlich eines internationalen Veranstaltungskalenders. Die bis Februar 2003 herausgegebenen 44 Ausgaben wurden an die Mitglieder und Abonnenten sowie an international wichtige Informationszentren und Institutionen verschickt. Auflage zur Zeit: 350.
- CD-Reihe mit Werken von Mitgliedern: DEGEM-CD 01 - 06 sowie eine CD mit 6 Produktionen des Studios der Akademie der Künste zu Berlin (1992), eine CD-ROM mit Arbeiten von Klangkünstlern (SCHOTT)

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