

Computer Music Association
Newsletter Vol. 1, No. 2
May 1980

With the second issue of the Newsletter, there is much to report on the status of the Association. Among the more unexpected and urgent is the need to announce a title change for the organization, prematurely dubbed the 'International Computer Music Association'. For most of us involved with the setup of the Association, it is not the most pleasant task. Upon writing the California Secretary of State to routinely request the reservation of this name, we were responded to unfavorably. It was stated that an existing organization, the 'International Music Associates' would have to give their personal consent as our proposed title conflicted with theirs. Below we have reprinted the Sec'y of State's response to our request (dated 2/22/80), our letter to I.M.A. (dated 2/26/80), and I.M.A.'s response (dated 3/25/80).



Office of the Secretary of State
March Fong Eu

1230 J Street
Sacramento, California 95814

22 February 1980

CORPORATE DIVISION

Legal Review (916) 445-0620
Certification (916) 445-1430
Status (916) 445-2900
Microfilm Records (916) 445-1768
Name Availability (916) 322-2387
Trademarks (916) 445-9872
Statement of Officers (916) 445-2020
Service of Process (916) 445-0620
Los Angeles Office (213) 620-3104

ICMA
P.O. Box 1634
San Francisco, CA
94101

Thomas L. Blum
c/o International Computer Music Association
P.O. Box 1634
San Francisco, Ca. 94101

2/26/80

This is in response to your inquiry of

10 February 1980

The following name(s) IS/ARE AVAILABLE for corporate use or reservation:

THE INTERNATIONAL COMPUTER MUSIC ASSOCIATION, INC. would be available only with the written consent of INTERNATIONAL MUSIC ASSOCIATES, INC. Their address is:

13128 Grape Arbor Wy.
Poway, Ca. 92064

Returned is your money order # 1-98710911

Return the above name(s) may be reserved for a period of 60 days for a fee of \$4.00 for each name reserved. If consent is required it must be written on letterhead stationery and signed by an officer of the consenting corporation.

The following name(s) is/are NOT AVAILABLE for corporate use or reservation because of a deceptive similarity to one or more corporate names in use or under reservation:

International Music Associates, Inc.
13128 Grape Arbor Way
Poway, CA 92064

Dear Reader,

Upon notice of the Secretary of State, March Fong Eu, I am writing this letter to request your permission to use the name of 'The International Computer Music Association, Inc.' as the title for a newly forming organization devoted to the furtherance and promotion of computer applications to music (e.g. composition, musicology, acoustic research). Enclosed, find a self-addressed, stamped envelope. We would greatly appreciate your response as we busily preparing incorporation paperwork. If you would like further information, please phone me at home, collect, from 7pm to midnight or at work, direct. (415) 658-5021, home phone. (415) 622-1879, bus. phone.

Yours Truly,

Thomas L. Blum
Thomas L. Blum
ICMA, co-director

March Fong Eu
Secretary of State

INTERNATIONAL
MUSIC
ASSOCIATES, INC.

XX
XX
TELEPHONE
XXXXXXXXXX
XX

13128 Grape Arbor Way
Poway Ca., 92064
Phone (714) 485-1312
25th March 1980

Mr. Thomas L. Blum
P.O. Box 1634
San Francisco Ca. 94101

Dear Sir:

This is in reply to your letter of 26th February, 1980 regarding the use of THE INTERNATIONAL COMPUTER MUSIC ASSOCIATION, INC., as the name of your company.

After consideration our board of directors have decided that the title used in the above context would be in conflict with the name of our corporation.

Our objection was based on the word INTERNATIONAL at the beginning of the title. If this could be rephrased such as COMPUTER MUSIC ASSOCIATION INTERNATIONAL, INC., we would offer no further objection.

Very truly yours
INTERNATIONAL MUSIC ASSOCIATES, INC.

E.R. Manierre
E.R. Manierre, Secretary

ERM/ ms

The way in which we plan to resolve the issue is by dropping the word 'international' from our title, altogether. (You should know that we did call I.M.A.'s E.R. Manierre to discuss the contention and that he and I.M.A.'s Board were adamant that our organization's title would indeed be in conflict. To further oppose the issue would require a lengthy and costly court case.) We in no way want this alteration to disappoint or irritate our members or potential members who are not in the U.S. We note both that this is a rather forced decision, and that the word 'international', itself, is not really crucial. The Computer Music Association is international due to its geographically diverse membership. Of course, your comments on the subject are welcome. I am very happy to say that we have received the go-ahead by the Calif. Sec'y of State to use the newly proposed title. And so, welcome to The Computer Music Association!!

Thom Blum
Thom Blum, CMA Co-director

In this issue of the C.M.A. Newsletter, we have included, among other items, a letter from member Jerry Fiddler, announcements of upcoming computer music workshops, concerts and related seminars, details on the 1980 International Computer Music Conference, abstracts from the conference 'Computer Music in Britain', abstracts from the IRCAM publications, some product announcements, a call for C.M.A. nominations, and several C.M.A. surveys.

Happy reading....



Lawrence Berkeley Laboratory

University of California
Berkeley, California 94720
Telephone 415/843-2740

Dear C.M.A.,

Please sign me up! It's about time such an association existed. Also, please make the following announcement in your newsletter for me.

I would like to work on a computer performance/studio instrument with someone in the San Francisco area. I'm a computer scientist/musician with experience in real-time systems, computer graphics, human interface and hardware design. I'm especially interested in using computer graphics and a touch sensitive CRT as the human interface to the instrument, but I'm open to anything.

Jerry Fiddler

2121 McGee
Berkeley, CA 94703

State of California No. 146450
Office of the
Secretary of State

I, MARCH FONG EU, Secretary of State of the State of California, do hereby certify that the name:

COMPUTER MUSIC ASSOCIATION

is not one which is likely to mislead the public and is not the same as, and does not resemble, so closely as to tend to deceive the name of a corporation formed under the laws of this State, or the name of a corporation not incorporated under the laws of this State which is authorized to transact intrastate business in this State, or a name which is under reservation, as provided in Section 201 of the Corporations Code of this State, and that this name is hereby reserved for a period of sixty days commencing on the date hereof for the use of the applicant for this certificate.



Issued April 16, 1980 kcc

March Fong Eu
Secretary of State

:*****:
New Members of The Computer Music Association
:*****:

Vidolin Alwise, Padova, Italy
Paul Berg, Utrecht, Netherlands
James L. Beug, Los Osos, California, USA
John H. Chalmers, Jr., Houston, Texas, USA
Conrad Cummings, Paris, France
G. Kevin Doren, Jamaica Estates, New York, USA
James S. Dorsey, M.D., Toronto, Ontario, Canada
Jim Dziedzig, Westland, Michigan, USA
Jerry Fiddler, Berkeley, California, USA
David S. Held, Buffalo, New York, USA
Akira Iwanda, Osaka, Japan
Otto Laske, Boston, Massachusetts, USA
Richard B. Mathias, San Leandro, California, USA
Giovanni de Poli, Padova, Italy
Gary M. Kader, Denver, Colorado, USA
Peter R. Samson, San Francisco, California, USA
Donald C. Schertz, Monterey, California, USA
John P. Shenale, Redondo Beach, California, USA
Donald Stevens, New York, New York, USA
University of Michigan, Ann Arbor, Michigan, USA
David M. Vosh, Gaithersburg, Maryland, USA
Dean Wallraff (for Digital Music Systems, Inc.), Brooklyn, New York, USA
Reynold Weidenaar, New York, New York, USA
Barry L. Willis, Waterloo, Ontario, Canada
Don Wilson, Baton Rouge, Louisiana, USA

:*****:
Organizing Committee of C.M.A.
:*****:

Bo Alphonse, Montreal, Quebec, Canada
Marc Battier, Paris, France
James Beauchamp, Urbana, Illinois, USA
Thomas Blum, Berkeley, California, USA - Co-director,
Newsletter Coordinator
Donald Byrd, Bloomington, Indiana, USA
James Dashow, Padova, Italy
Beverly Grigsby, Northridge, California, USA
Dorothy Gross, Minneapolis, Minnesota, USA
Hubert S. Howe, Jr., Flushing, New York, USA
Gary Kendall, Evanston, Illinois, USA
Curtis Roads, Cambridge, Massachusetts, USA - Co-director
John Strawn, Stanford, California, USA

:*****:
OFFICERS APPOINTED
:*****:

The Computer Music Association had its first official meeting of the Board of Directors on March 1, 1980, in Menlo Park, CA. The purpose of this meeting was to proceed with the "bootstrapping" process necessary for establishing the Association as a non-profit, tax-exempt corporation. Temporarily, offices of President, Vice-President and Secretary-Treasurer were distributed among the organizing directors as follows: Pres. - Thomas L. Blum, V.Pres. - Curtis B. Roads, Sec.-Tres. - John M. Strawn. This reassigns the interim assignment of posts for the Association until the first general election. Note, in this issue of the newsletter, the announcement calling for nominations to the Board of Directors. By the November '80 International Computer Music Conference (see announcement, below), a democratically elected Board will be in place.

::*:*:*:
Announcements
::*:*:*:

M.I.T. Special Summer Program
Techniques of Computer Sound Synthesis, June 16- June 27 (\$1000)
Workshop in Computer Music Composition, June 30 - July 28 (\$1200)
Public Concert work, July 28
Both programs offered by M.I.T. Studio Director, Prof. Barry Vercoe
For Further Info: Director of the Summer Session
Room E19-356, M.I.T.
Cambridge, MA 02139

Stanford University Dept. of Music
Workshop in Computer-Generated Music, June 23 - July 18 (\$675)
Directed by Chowning, Smith, Grey, Hooper, Rush
For Further Info: Dept. of Music
Stanford University
Stanford, CA 94305

Colgate University
Two Workshops in Computer Music - 1980
James Beauchamp - Computer Analysis and Synthesis Programs,
April 3 - April 6
Dexter Morrill - Introduction to Computer Generated Music,
August 22 - August 27 (\$50)
For Further Info: Dexter Morrill
Director, Computer Music Studio
Colgate University
Hamilton, NY 13346
(315) 824-1000, Ext. 628

University of California Extension, Santa Cruz
Tenth Annual Institute in Computer Science
Five Computer Short Courses (\$625 - \$800)
Programming Methodology, July 7 - July 18
Programming Language Semantics, July 7 - July 18
Computer System Performance Prediction, July 18 - July 18
Design and Implementation of Modular Software,
July 18 - July 18
Operating Systems, July 23 - July 29
Compiler Construction, July 28 - August 8
Code Optimization, August 11 - August 15
Writing Workshop in Computer Science, August 11 - August 22
Formal Design of Computer Programs, August 8 - August 15
For Further Info: Dept JKH, UCSC Extension
CARRIAGE HOUSE
Santa Cruz, CA 95064
(408) 829-2614, Adele Wood

ADA Symposium - Call for Papers
Sponsored by The ACM SIGPLAN on the Ada Programming Language
to summarize and assess progress in the design, evaluation,

implementation, and application of Ada
Papers due by May 5, 1980

Conference dates December 9 - December 11, 1980

For Further info: ADA Symposium: Attn Elliott I. Organick
Dept. of Computer Science
3160 Merrill Engineering Building
University of Utah
Salt Lake City, Utah 84112

AAAI Conference - Call for Papers

The recently formed American Association for Artificial Intelligence is extending a call for papers for its first annual conference which will be held at Stanford University. Submissions should not exceed 2000 words.

Conference dates August 18 - August 21, 1980

Papers due by May 1 to: Robert Balzer
AAAI Conference Program Chairman
USC/Information Science Institute
4676 Admiralty Way
Marina Del Rey, CA 90291



INA GRM CYCLE ACOUSMATIQUE 1980




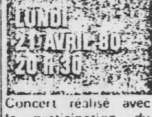

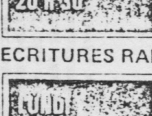
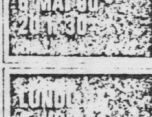
GRAND AUDITORIUM de la Maison de Radio-France, 116, av. du Président-Kennedy 75016 Paris

Programme de la saison :

Producteur délégué : Ivo Malec assisté de Geneviève Mâche

MUSIQUES

Introductions de Jean-Michel DAMIAN

	François BAYLE	Erosphère (1979). Création. - La fin du bruit - Tremblement de terre très doux - Toupie dans le ciel
	Jacques DIENNET Jean SCHWARZ	Suite concertante (1979). Création. Avec : J. Diennet, synclavier Windmills (1978) Gamma Plus (1979). 1ère audition à Paris. Avec : Trio-Grm-Plus (L. Cuniot, D. Dufour, Y. Geslin), synthétiseurs.
	Jacques LEJEUNE Bernard PARMEGIANI	Entre terre et ciel (1979). Création. Stries (1980). Création. Avec : Trio-Grm-Plus, synthétiseurs.
	Guy REIBEL Ivo MALEC	Energies (1980). Création. Avec : J.-Cl. Penntier, piano Recitativo (1980). Création. Vox, vocis, f. (1979). 1ère audition à Paris. Avec : N. Robin et M-Th. Foix, sopranos, N. Oxombre, alto Ensemble 2 E 2 M, direction J Cl. Penntier
	Andrew BENTLEY Gilbert AMY	Carillon. Bowing (1978) Premières auditions en France. Une saison en enfer (1979/80). Création. Avec : C. Roque-Alsina, piano
ECRITURES RADIOPHONIQUES		Avec la collaboration de l'Atelier de Création Radiophonique.
	John CAGE René FARABET Mauricio KAGEL	Composition sonore de René FARABET à partir de : Il treno L'ai-je bien descendu, l'avons-nous bien monté L'inversion de l'Amérique Premières auditions publiques en France
	Pierre SCHAEFFER René JENTET Michel FANO	La coquille à planètes (1944), extrait. Pour quoi ? (1973) Chambre secrète (1978) Premières auditions publiques à Paris.

* Exceptionnellement dans le nouvel Auditorium 106

1980 INTERNATIONAL COMPUTER MUSIC CONFERENCE
NOVEMBER 13-16, 1980
QUEENS COLLEGE of the City University of New York

The Department of Music at Queens College of the City University of New York cordially invites you to attend the 1980 International Computer Music Conference, to be held in New York City at Queens College in Flushing, New York. The first meeting of the International Computer Music Association will also be held on this occasion. The International Computer Music Conference is the primary annual meeting for persons interested in computer applications in music. Conference activities include presentation of papers, concerts, workshops, panel discussions, meetings of special interest groups, demonstrations, and a special exhibition of computer music equipment. Conference sessions will include the following topics:

synthesis hardware
synthesis software
computer composition
system overviews
studio reports
acoustics and psychoacoustics
sound analysis
use of computers in musicology and music theory
musical analysis
musical data structures and input languages

Concerts will feature music composed or generated with the aid of a computer. Special interest groups will be held on topics proposed by participants.

The advance registration fee must be received no later than October 1, 1980, after which time a surcharge will be added. Late registration will take place in the lobby of the Queens College Theater, located at the corner of the Long Island Expressway and Kissena Blvd., where a registration booth will be maintained during the Conference.

The Conference is being held under the direction of Prof. Hubert S. Howe, Jr. of the Music Department. Information about scheduling or other details can be obtained by calling Gretchen Clumppner at (212) 520-7342.

The Grand Hyatt New York, a new hotel opening in 1980 near Grand Central Station in downtown New York City, has been selected as the official hotel for the Conference. Special rates of \$90.00 per single room and \$100.00 per double room have been obtained for Conference participants. Reservations must be made by October 23, 1980 to obtain these special rates. Participants are advised that November is a particularly busy month for conventions in New York City, and

arranging accommodations at other hotels or after this date will be difficult. Transportation from the hotel to the College will be arranged to coincide with the Conference schedule.

Maps, transportation information, and a pre-Conference schedule will be sent to registrants after October 15th.

Complete proposals for presentation of papers or musical works for performance at concerts may be submitted until September 15, 1980. PROPOSALS RECEIVED AFTER THIS DATE CANNOT BE CONSIDERED.

- To deliver a paper, send an ABSTRACT describing the subject, length of time requested, and special facilities needed. Most papers will be restricted to a time limit of 20 minutes.

- To submit a composition for performance on one of the concerts, send a score and/or tape of the work (7 1/2 or 15 inches per second, 2-track stereo or 4-track quad, 1/4-inch tape only on a REEL) together with complete program notes describing the role of the computer in the work. A limited number of performers will be available for instrumental works, as well as electronic playback facilities. Only in unusual circumstances will works longer than 15 minutes be considered. No proposals for incomplete works will be considered.

- To arrange for exhibition space, describe needs. Fees to cover insurance, security guards, and other special requirements will be assessed all exhibitors.

To submit proposals for papers, compositions, or exhibitions, write to:

Dr. Hubert S. Howe, Jr., Director
1980 International Computer Music Conference
Queens College
Flushing, New York 11367

For other information, contact:

Music Department
c/o Ms. Gretchen Clumppner
Queens College
Flushing, New York 11367
(212) 520-7342

DATES: NOVEMBER 13-16, 1980
LOCATION: Queens College
of the City University of New York

HOTEL ACCOMMODATIONS: Grand Hyatt New York
Park Avenue at Grand Central
New York, NY 10017
(212) 803-1234

Abstracts from the Conference: "Computer Music in Britain", held in Edinburgh, Scotland, from the 8th to the 11th of April, 1980.

"Series Phi" - Lawrence Casserly

Software for the control of a digital synthesis system, which allows specification of any parameter as a 'constant', a 'function' or a 'variable', will be presented. In conjunction with suitable input devices and digital synthesis hardware a viable live performance instrument is possible.

The Musician-Machine Interface - Stanley Haynes

Digital sound processing systems allow sounds to be manipulated with greater precision and acoustic fidelity than their analogue counterparts, and the advent of microcomputer-controlled digital synthesizers is overcoming the limitation that the general-purpose synthesis languages cannot usually operate in real time. An important advantage of computer systems is that, since data must be prepared in a structured form, it can easily be stored and used again when needed. However, weaknesses exist in the design of the interface between the musician and the system in existing languages. It is my purpose in this paper to discuss how this problem has been tackled in existing systems and to suggest improvements which might be made in the future.

Computer Composition with Grammars - S. R. Holtzman

The application of grammatical processes for music composition is discussed, considering the use of 'context-free' and 'context-sensitive' type grammars, problems of context sensitivity and the alternative of 'regulated' grammars. Examples are given in GGD, a Generative Grammar Definition Language, and discussed in particular in the context of their use in a real-time composition/synthesis distributed digital system implemented at Edinburgh.

Stochastic Structuring Techniques - Kevin Jones

Techniques of pattern formation are described which have been developed and used in original compositions based on stochastic generative schemes. The examples cited range from the application of simple probability distributions through to intricate structures of inter-related stochastic constraints under the control of a general grammatical schema.

Computer output for transcription for performance by conventional musical forces and for direct control of digital sound synthesis programs and equipment are referred to, considering research carried out at the City University as well as results of work undertaken on visits to IRCAM and the Institute of Sonology, Utrecht.

An Heuristic Approach to Computer Composition - R. Atree

I shall describe a model of composing processes in terms of memory of past events, information content of now moment, field of expectations about next and future moments, feedback leading to continuity tension; treating music as a hierarchical system and going on to describe some programs and playing some results.

For reprints contact: Simon Emmerson
Sec'y to EMAS
Computer Music Conf. Proceedings
72 Hillside Rd.
London N15 ENGLAND
\$16.00 incl. postage

A Computer Program for Melodic Improvisation - M. Greenhough

A program will be described and demonstrated which produces melodic improvisations appropriate to a chord sequence provided by the user. The system used is a simple hybrid one consisting of a PDP8/I computer providing voltage control of an oscillator on a VCS3 synthesizer. Notes are chosen according to stored probability distributions which determine the prevailing harmony and also control the melodic intervals. The probability data can be changed in real time whilst the melodic line is being output. Heuristic input routines are being developed which, it is hoped, will enable the user to modify these data according to musical taste without necessarily knowing explicitly in what way.

An Interactive Hybrid Computer Music System - M. West

The system permits the user to enter data defining up to 1024 notes, of any pitch and duration, which are grouped into bars. Having entered this compositional raw material, the user types a series of instructions which govern how the system will 'replay' the data via the analogue synthesizer part of the system. The user can elect to play groups of bars in any order any number of times, simultaneously applying one or several of the possible transformations; these include retrogression, transposition, pitch inversion, rhythmic inversion, (rhythmic) augmentation and diminution, and the sharpening or flattening of specified degrees of the scale.

Demonstration of ITT2020 (Apple II) microcomputer - K. Jones

Many microprocessors are equipped with a simple circuit which will "toggle" a loudspeaker in response to a certain machine instruction. A wide and interesting variety of square-wave based sounds can be produced by using various programming tricks. Some of these sound possibilities will be demonstrated along with the colour graphics which enhance the machines capabilities.

There is considerable scope for interactive control, and it is expected that demonstration programs will be available which can be operated by completely inexperienced users.

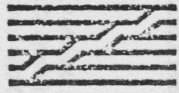
A Digital Synthesis Module for live performance - L. Casserly

A flexible digital synthesizer/processor, which can implement generators, filters, modulators, etc. under control of a microprocessor will be presented. The module has been designed with live performance particularly in mind, but should also be a useful studio unit.

The Edinburgh GGD system - S. R. Holtzman

The Edinburgh GGD composition/synthesis system consists of a network of computers. A central computer receives composition and performance instructions from a user in an interactive manner and controls communications with subordinate digital synthesizers. Subordinate digital synthesis/performance instruments include the PDP-15 Non-Standard Digital Synthesizer, direct-wave synthesis and FMS.

Publications IRCAM



Centre Georges Pompidou

* Reprinted in CMA Newsletter by permission of IRCAM

77-78

Rapports scientifiques

1 LA RECHERCHE A L'IRCAM EN 1977 Gerald Bennett

Ce rapport décrit les premières recherches menées à l'IRCAM : synthèse digitale sur ordinateurs à usage général, synthèse digitale sur systèmes spécifiques, études psychoacoustiques destinées à faciliter la synthèse. Il se termine par un résumé des principaux projets pour 1978.

(disponible en français)

2 UNITE ELECTRONIQUE DESTINEE A LA TRANSFORMATION DU SON EN TEMPS REEL, PROGRAMMABLE ET CONTROLABLE PAR L'INSTRUMENTISTE René Caussé et al.

Un petit système expérimental de filtre et de modulateur analogue électronique comportant une matrice d'interconnexion modifiable a été utilisé dans l'oeuvre de Vinko Globokar KOEXISTENZ pour deux violoncelles dont l'un est amplifié et modifié. Ce rapport fournit une description technique de ce système ainsi que les diagrammes des circuits. Un journal décrivant l'expérience du compositeur et de l'interprète est également inclus.

(disponible en français)

3 FACILITES POUR LA MUSIQUE PAR ORDINATEUR EXISTANT A L'IRCAM EN OCTOBRE 1977 John Gardner et al.

Ce rapport présente les buts et l'état provisoire du système informatique de l'IRCAM en ce qui concerne le logiciel et le matériel. Il mentionne brièvement la nature et les auteurs des nombreux programmes d'utilisation, ainsi que des programmes au niveau du système qui constituent le fond IRCAM.

(disponible en anglais)

Scientific reports

1 RESEARCH AT IRCAM IN 1977 Gerald Bennett

The first research undertaken at IRCAM : digital synthesis on general purpose computers, digital synthesis on specific devices and psychoacoustic studies to aid synthesis are described, ending with a summary of the 1978 projects.

(available in English)

2 A PROGRAMMABLE DEVICE FOR TRANSFORMING SOUNDS IN REAL-TIME UNDER THE CONTROL OF A PERFORMER René Caussé et al.

A small experimental analog electronic filter/modulator device with changeable interconnection matrix was used in the work KOEXISTENZ for two celli, one unmodified and the other amplified and modified. The technical description of the device is given, including circuit diagrams. A journal describing the experiences of the composer and performer is included also.

(available in French)

3 COMPUTER FACILITIES FOR MUSIC AT IRCAM, AS OF OCTOBER, 1977 John Gardner et al.

The projected goals and current status, both software and hardware, of the IRCAM computer system are described with brief mention of the nature and authorship of the many user and system level programs that go to make up the program library.

(available in English)

4 SYNTHETISEUR NUMERIQUE A 64 VOIX SUR UNE SEULE CARTE
Giuseppe di Giugno et Hal Alles

Un synthétiseur numérique comportant 64 oscillateurs à un taux d'échantillonnage de 32 KHz, 128 générateurs d'enveloppe et 15 registres d'accumulation et d'interconnexion a été construit à l'IRCAM. Ce rapport décrit certains détails techniques tels le nombre de bit utilisé dans les calculs et le diagramme fonctionnel par blocs.

(disponible en anglais)

4 A ONE CARD 64 CHANNEL DIGITAL SYNTHESIZER
Giuseppe di Giugno and Hal Alles

A digital synthesizer providing 64 oscillators at 32 KHz sampling rate with 128 envelope (ramp) generators and 15 accumulating and interconnecting registers has been built at IRCAM. This paper describes some of the technical details, such as the numbers of bits in the data paths and the functional block diagram of the device.

(available in English)

5 CONTROLE D'UN SYNTHETISEUR EN TEMPS REEL
Max Mathews et Gerald Bennett

Ce rapport traite du problème du contrôle des synthétiseurs numériques de grande puissance et évoque les types de contrôle possibles avec leurs diverses implications (clavier ; crayon optique, etc.) en termes de précision, de vitesse et de qualité du contrôle.

(disponible en anglais)

5 REAL-TIME SYNTHESIZER CONTROL
Max Mathews and Gerald Bennett

The problem of controlling powerful digital synthesizers is discussed with some thoughts on the kinds of control that are possible and the implications of each kind (keyboard, light-pen, etc.) in terms of the quality of control, the precision and the speed.

(available in English)

6 UTILISATION DE LA PREDICTION LINEAIRE DE LA PAROLE APPLIQUEE A LA MUSIQUE PAR ORDINATEUR
James A. Moorer

Ce rapport traite des diverses décisions qui interviennent pour faire fonctionner correctement dans le cadre de la musique par ordinateur un vocoder à prédiction linéaire. Les effets de la période d'analyse, du type de prédiction, des décisions de type voisé/non voisé/silencieux, de l'ordre des filtres et d'autres paramètres sont présentés en fonction de la qualité obtenue.

(disponible en anglais)

6 THE USE OF THE LINEAR PREDICTION OF SPEECH IN COMPUTER MUSIC APPLICATION
James A. Moorer

The various decisions involved in making a linear prediction vocoder function properly for the computer music case are discussed. The effects of frame size, kind of prediction, voiced/unvoiced/silence decision, filter order, and other parameters on the resulting quality is presented.

(available in English)

- 7 MUSICA, PROGRAMME DE CODAGE DE LA MUSIQUE
Giovanni de Poli

Il s'agit du manuel de l'utilisateur pour un langage d'entrée de partitions musicales permettant le phrasé et l'ornementation.

(disponible en français)

- 7 MUSICA, A PROGRAM FOR ENCODING MUSICAL SCORES
Giovanni de Poli

This is the user's manual for an input language for conventional musical scores with provision for phrasing and ornamentation.

(available in French)

- 8 ACOUSTIQUE MUSICALE
Jean-Claude Risset

Ce rapport passe en revue de nombreux aspects de l'acoustique musicale, prenant pour point de départ des questions de hauteur, de durée et de rythme, traitant ensuite de la physique et des timbres des instruments de musique pour en arriver à la musique synthétique et électronique.

(disponible en anglais)

- 8 MUSICAL ACOUSTICS
Jean-Claude Risset

This is a survey of many of the aspects of musical acoustics, beginning with a discussion of pitch, duration, and rhythm, treating next the physics and timbres of musical instruments, ending with synthetic and electronic music.

(available in English)

- 9 LE DEVELOPPEMENT DES TECHNIQUES NUMERIQUES : TOURNANT POUR LA MUSIQUE ELECTRONIQUE ?
Jean-Claude Risset

Ce rapport traite de la synthèse numérique directe, de ses problèmes, de ses implications pour le compositeur et du rôle de la recherche dans l'exploration musicale. Il passe en revue diverses techniques aussi bien hybrides qu'entièrement numériques.

(disponible en anglais)

- 9 THE DEVELOPMENT OF DIGITAL TECHNIQUES : A TURNING POINT FOR ELECTRONIC MUSIC ?
Jean-Claude Risset

Direct digital synthesis, its problems, implications for the composer and the role of research in musical exploration are discussed. Various techniques, both hybrid and all-digital

(available in English)

- 10 PARADOXES DE HAUTEUR
Jean-Claude Risset

Conformément à la suggestion de SHEPARD de nombreux sons paradoxaux entièrement nouveaux ont déjà été produits : sons qui semblent descendre alors qu'en réalité ils deviennent plus hauts ou qui ont l'air de ralentir alors qu'il s'accélérent. Ce rapport aborde un certain nombre d'implications relatives à la théorie de l'audition.

(disponible en français)

- 10 PARADOXES OF PITCH
Jean-Claude Risset

Following the suggestion of SHEPARD, many new different paradoxical sounds have been produced : sounds that appear to slow down while actually speeding up. Some discussion of the implications for the theory of hearing is included.

(available in French)

11 HAUTEUR ET TIMBRE DES SONS
Jean-Claude Risset

Ce rapport traite des implications de certaines données connues concernant la hauteur et le timbre en rapport avec la théorie de l'audition; il donne des exemples tirés des études psychoacoustiques et de l'expérience musicale.

(disponible en français)

12 CONTROLE DU TIMBRE MUSICAL AVEC PEU DE PARAMETRES
David L. Wessel

Ce rapport traite de la possibilité d'utiliser des paramètres dérivant directement de jugements perceptuels sur des sons synthétiques pour contrôler la synthèse du son. Des exemples sont choisis dans le domaine de la synthèse additive des timbres de certains instruments orchestraux utilisant des dimensions tirées d'expériences d'analyse multidimensionnelle portant sur ces timbres de base.

(disponible en anglais)

13 PERCEPTION DES ANALOGIES DE TIMBRES
David Ehresman et David L. Wessel

Ce rapport étudie la transposition des mélodies de timbres dans le contexte d'une représentation spatiale des timbres de sons synthétisés de type instrumental. Les auditeurs ont eu à résoudre des problèmes du type quel est le son D qui rend l'analogie des timbres C et D parallèle à celle des timbres A et B. La solution fournie par les auditeurs recoupe un modèle perceptuel qui transpose une séquence de timbres en en formant une autre qui lui est parallèle dans l'espace des timbres.

(disponible en anglais)

11 PITCH AND TIMBRE OF SOUND
Jean-Claude Risset

The implications for theories of hearing of some of the known data on pitch and timbre are discussed, with some examples from psychoacoustical studies and from musical experience.

(available in French)

12 LOW DIMENSIONAL CONTROL OF MUSICAL TIMBRE
David L. Wessel

The idea of using parameters derived from perceptual judgments of synthetic sounds to control the synthesis of sounds is discussed. Examples are given in the area of additive synthesis of timbres of certain orchestral instruments using dimensions derived from multidimensional scaling experiments on these root timbres.

(available in English)

13 PERCEPTION OF TIMBRAL ANALOGIES
David Ehresman and David L. Wessel

The transposition of timbre melodies was studied in the context of a "timbre space" representation of synthesized instrument-like sounds. Listeners solved problems of the form: what sound D best completes the analogy timbre A is to timbre B as timbre C is to timbre D? The listeners' solutions agreed with a perceptual model that transposes a timbre sequence by forming another parallel to it in the timbre space.

(available in English)

not available

14 STRUCTURES CONCEPTUELLES POUR LA REPRESENTATION DU MATERIAU MUSICAL

David L. Wessel et John Grey

Ce rapport décrit plusieurs expériences psychoacoustiques utilisant des méthodes d'analyse multidimensionnelle ou des méthodes apparentées pour la représentation du matériau musical.

(disponible en anglais)

15 MODELE INFORMATIQUE DES SYSTEMES STEREOPHONIQUES

Benjamin Bernfeld et Bennett Smith

Ce modèle est destiné à simuler la "réponse" de localisation stéréophonique et d'autres caractéristiques importantes du son reproduit. Il se base pour la prise de son et les systèmes de reproduction sur les paramètres suivants : disposition polaire et emplacement des microphones utilisés (jusqu'à 4), distance des sources sonores et de leurs spectres, dispositif de haut-parleurs et psychoacoustique de la localisation des sons. Le rapport analyse les systèmes stéréophoniques traditionnels et compare leurs performances.

(disponible en anglais)

CASSETTE D'EXEMPLES SONORES

Une cassette d'exemples sonores correspondant aux rapports de Jean-Claude Risset Nos 10 et 11, ainsi qu'au rapport de David Wessel No 12 sera prochainement disponible.

14 CONCEPTUAL STRUCTURES FOR THE REPRESENTATION OF MUSICAL MATERIAL

David Wessel and John Grey

A survey of several psychoacoustic experiments using multidimensional scaling and related methods for the representation of musical material.

(available in English)

15 COMPUTER-AIDED MODEL OF STEREOPHONIC SYSTEMS

Benjamin Bernfeld and Bennet Smith

The model is intended to simulate the stereophonic localization "response" and other important characteristics of the reproduced sound. It accepts the following parameters of the sound pick-up and reproduction systems : the polar pattern and position of the microphones used (up to 4), the distance of the sound sources and their spectrum, the lay-out of the loudspeakers and the psychoacoustics of sound localization. Traditional stereophonic systems are analysed and their performances compared.

(available in English)

CASSETTE OF MUSICAL EXAMPLES

A cassette illustrating Jean-Claude Risset's reports Nos 10 and 11, as well as David Wessel's report No 12, will be available in the near future.

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The following is to be appended to the Survey of Music Theory Activities compiled by Dorothy Gross and published in the CMA Newsletter, Vol. 1, No. 1, Jan. 1980.

Name: Thomas G. Whitney, Ohio State University, Instruction and Research Computer Center, 1971 Neil Ave., Columbus, Ohio 43210, USA.

Hardware: IBM 360 or 370 or Amdahl

Software: SLAM (a Simple Language for Analyzing Music): more than 80 commands divided into three categories; data modification operations, analytic operations, documentation operations can be used to provide users with a variety of tools. SLAM is well documented and does not demand that the user be trained in programming.

Nominations Open for the Computer Music Association Board of Directors

Nominations are now open for the first annual election of the Board of Directors for C.M.A. Nominations will close September 15, 1980 and candidates will be announced in the ballot going out in the October newsletter.

Candidates may be nominated by the C.M.A. nominating committee or by member petition. Any general or student member is eligible to serve on the Board. Petitions must contain valid signatures of two members and be accompanied by the written consent of the nominee. Formal petitions should be mailed to:
Computer Music Association
P.O. Box 1634
San Francisco, CA 94101

*:*****:
PRODUCT ANNOUNCEMENTS
*:*****:

Casheab has designed and developed a 32 channel digital sound synthesizer for the S-100 bus. The synthesizer consists of two cards: a synthesizer card (SYN-10) and a controller card (CTR-10). Either 4 waveforms (SYN-10/4) or 16 waveforms (SYN-10/16) can be stored. The waveform creation software, supplied on a CP/M compatible floppy disk, generates waveforms from user provided frequency data. This program, written in BASIC, utilizes an FFT algorithm. In addition, attack, steady state and decay envelopes can be implemented by the processor controlling each channel's amplitude. Also, the synthesizer incorporates frequency modulation which can be used for FM synthesis.

For more information write to: Casheab
5737 Avenida Sanchez
San Diego, CA 92124
(714) 277-2547

SYN-10/4 & CTR-10	\$1095.00
SYN-10/16 & CTR-10	\$1245.00
Manual	\$5.00

The MIT Experimental Music Studio has recently released its MUSIC-11 digital sound synthesis program for public use. MUSIC-11 has been used MIT and has been proven robust and reliable.

The software runs on the PDP-11 series models 11/34, 11/40, 11/45, 11/50, 11/55, 11/60, 11/70 or on an LSI-11 and requires hardware floating point. MUSIC-11 will run under UNIX, RSX-11M or RT-11 operating systems.

Some of the MUSIC-11 features are:

- newly developed orchestra language for defining 'instruments'.
- fast orchestra translator resulting in turnaround times of roughly 5 seconds for sound generation.
- dynamic instrument (memory) allocation.
- new score language
- variety of synthesis methods including FM, direct, additive, etc.

For further information regarding cost, delivery and maintenance contact Barry Vercoe, Rm 26-311, MIT, Cambridge, MA 02139, (617) 253-7441.