

**un répertoire
d'informatique musicale /
a computer music
repertory /
musica e calcolatore:
un repertorio**

complié et édité par /
compiled and edited by /
composto da

**jacques arveiller, marc battier
& giuseppe g. englert**

à l'occasion de la /
on the occasion of the /
in occasione della
retrospektiva internazionale computer music '75

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**groupe art et informatique de vincennes
université de paris VIII
(artinfo / musinfo numéro spécial 23-24-25)**

Le présent répertoire constitue le complément écrit de l'ensemble de concerts et de conférences donnés à Como lors de la Rétrospective Internationale Computer Music '75, dans le cadre du 9ème Automne Musical (26 septembre - 3 octobre 1975)

Ce répertoire a pour visée de mettre en rapports des gens qui travaillent sur des sujets proches, dans le champ de l'Informatique Musicale, et espère ainsi économiser et concentrer les énergies dévolues à ce type de recherches (*).

Nous avons rassemblé l'information qui suit en écrivant environ 150 lettres (cf. annexe 1) auxquelles étaient joints un questionnaire (cf. annexe 2) et une réponse-type (cf. annexe 3). Les lettres n'ont évidemment été envoyées qu'à ceux dont nous connaissons l'existence et l'adresse; ceci explique qu'un certain nombre de praticiens de l'Informatique Musicale ne figurent pas dans notre répertoire. Parmi eux:

- ceux dont nous ignorions l'existence
- ceux que nous connaissons de nom, mais dont nous ne possédions pas l'adresse
- ceux auxquels nous avons écrit, mais dont la lettre nous a été retournée, pour cause d'adresse erronée ou trop ancienne
- ceux enfin qui n'ont pas eu le temps de nous répondre.

Nous serions très contents de pouvoir corriger ces omissions, et demandons par conséquent à nos lecteurs qu'ils communiquent le questionnaire (annexe 2) ou sa photocopie à ceux qui ne sont pas mentionnés dans le répertoire, afin que ces derniers nous écrivent, et que nous puissions publier ultérieurement une édition remise à jour.

Les informations contenues dans les pages qui suivent ne concernent bien entendu que le travail effectué par chacun avant la date de réception (indiquée en bas de page). Nous souhaiterions que nos correspondants nous tiennent au courant de leurs réalisations plus récentes, toujours dans l'idée d'une ultérieure mise à jour.

Nous avons voulu respecter le désir de chacun en ne publiant ici que ce qui nous avait été envoyé, même si cela ne représentait notoirement, pour tel ou tel, qu'un sous-ensemble des travaux réalisés. Le lecteur férus d'exhaustivité pourra se reporter aux bibliographies d'Informatique Musicale publiées à ce jour (par exemple celles de Lejaren Hiller, de Stefan Kotska ou de Marc Battier).

(*) Nous partageons par conséquent les buts et les méthodes de la Computational Musicology Newsletter éditée par Jerome Wenker, auquel nous avons emprunté nos mots-clés, et que nous remercions.

Nous n'avons que très peu modifié les textes reçus: nous ne nous le sommes permis que dans le but d'homogénéiser la présentation des références bibliographiques et, dans des cas exceptionnels, de réduire un peu certains textes trop longs.

Nous tenons à remercier ici G'sella Belgeri et Italo Gomez, de L'Automne Musical de Como, ainsi que le secrétariat du Département d'Informatique de l'Université Paris VIII - Vincennes pour l'aide qu'ils nous ont apportée dans la réalisation de notre projet.

Jacques Arveiller
Marc Battier
Giuseppe G. Englert

Note concernant la présentation :

1. Les lignes figurant en tête de chaque feuille correspondent respectivement à l'adresse personnelle, à l'adresse professionnelle et à un éventuel groupe d'appartenance.
2. Les têtes de paragraphes ne représentent que des abréviations des questions plus fournies posées à l'origine.
3. La colonne de droite de chaque feuille contient, en regard de chaque information, un ou plusieurs mots-clés dont la signification est la suivante:

GMT	sujets généraux ou multiples
MEA	codage musical analogique
MEV	codage musical visuel
MEK	codage musical sur support perforé
MPrC	musique imprimée par ordinateur
MPeC	musique exécutée par ordinateur
MCC	composition musicale avec ordinateur
CAMA	analyse musicale avec ordinateur
CAMD	documentation musicale avec ordinateur
CAME	éducation musicale avec ordinateur

The present repertory constitutes the written complement of the concerts and conferences held in Como during the Retrospettiva Internazionale Computer Music '75, which took place at the 9th Autunno Musicale (26th of september - 3rd of october 1975)

The object of this repertory is to facilitate interaction between people working on related topics in the field of Computer Music, in-so-doing concentrate and save energies devoted to those types of researches (*).

We gathered the following information through sending about 150 letters (cf. appendix 1), to which were joined a question form (cf. appendix 2) and an answer form (cf. appendix 3). Obviously, the letters were sent only to those whose existence and address where known by us; this explains why a certain number of people involved in the Computer Music field have been omitted. Among them:

- those who were unknown to us
- those who we knew, without knowing their addresses
- those whose letters were returned because of wrong or old addresses
- finally those who did not have time to answer.

We will gladly correct those omissions; consequently we ask our readers to give the questionnaire or a copy to those not included in the repertory, so that they can respond, thus making it possible for us to subsequently publish an updated edition.

The information contained in the following pages concerns only the work done prior to the date the questionnaires were received (indicated at the bottom of every page). We would hope that our correspondants keep us informed as to their more recent activities, always with the idea of updating the publication.

We have printed only the information that was sent to us, in this way we tried to respect the wishes of everyone, eventhough this represented for some merely a subset of their realized works. The reader enamoured by exhaustive research could refer to the previously published bibliographies of Computer Music (i.e. those by Lejaren Hiller, Stefan Kostka or Marc Battier).

(*) We share therefore the same objective and methods of the Computational Musicology Newsletter. We thank the editor, Jerome Wenker, from whom we have borrowed our key words.

The information we have received has been subjected to very little modification: we permitted ourselves to alter the material for homogeneous presentation of the bibliographical entries, and in exceptional cases, to condense portions of some of the longer texts.

We would like to express our sincere gratitude to Gisella Belgeri and Italo Gomez, of the Autunno Musicale of Como, as well as the secretarial staff of the Computer Science Department of the University of Paris VIII-Vincennes, for the support they gave to us in the realization of this project.

Jacques Arveiller
Marc Battier
Giuseppe G. Englert

Note concerning the presentation:

1. The headlines of every entry correspond respectively to the personal address, the professional address, and to a possible group affiliation
2. The titles of paragraphs represent only abbreviations of the more substantial questions originally asked
3. The right column of each page contains, opposite to every information, one or more key words whose significance is following:

GMT	General or Multiple Topics
MEA	Music Encoding - Analog
MEV	Music Encoding - Visual
MEK	Music Encoding - Keypunch
MPrC	Music Printed by the Computer
MPeC	Music Performed by the Computer
MCC	Music Composed by the Computer
CAMA	Computer-Aided Music Analysis
CAMD	Computer-Aided Music Documentation
CAME	Computer-Aided Music Education

Il presente repertorio costituisce l'informazione scritta, complemento al complesso di concerti e conferenze presentato sotto il titolo "Retrospettiva Internazionale Computer Music '75" all'occasione del nono Autunno Musicale a Como (26 settembre - 3 ottobre '75).

Con questo documento si vorrebbe mettere in rapporto le persone che lavorano su soggetti simili nel campo dell'Informatica Musicale; e si spera di economizzare così e far convergere energie tendenti a questo genere di ricerche (*).

Abbiamo riunito le informazioni che seguono, scrivendo circa 150 lettere (v. appendice 1) alle quali abbiamo aggiunto un "questionnaire" (v. appendice 2) e un paradigma di risposta tipo (v. appendice 3). Le lettere, evidentemente, sono state inviate solamente alle persone la cui esistenza ci era nota con recapito, il che spiega che un certo numero di persone attive nel campo dell'Informatica Musicale non figurano nel nostro repertorio; particolarmente:

- coloro cui esistenza ignoriamo
- coloro che ci son noti ma di cui non conosciamo un recapito
- coloro a chi abbiamo scritto, ma la lettera ci è stata rimandata perché l'indirizzo non è più attuale
- coloro, infine, che non hanno trovato il tempo di risponderci.

Saremmo felici di poter correggere queste omissioni. Perciò domandiamo ai nostri lettori di comunicare il "questionnaire", o fotocopia, a coloro cui menzione manca nel repertorio, affinché questi ci scrivano e che noi possiamo pubblicare ulteriormente un'edizione aggiornata.

Le informazioni contenute nelle seguenti pagine riguardano il lavoro compiuto da ciascuno avanti la data di ricevimento (in basso a ogni pagina). Ci farebbe piacere, ancora pensando a un aggiornamento ulteriore, che i nostri correspondenti ci tengano al corrente delle loro realizzazioni più recenti.

Abbiamo voluto rispettare il desiderio di ciascuno, pubblicando solamente le informazioni inviateci, anche se queste, per taluni, non coprono notoriamente che una parte del lavoro compiuto. Il lettore avido d'informazione esauriente potrà riportarsi alle bibliografie d'Informatica Musicale già pubblicate (p. es. quella di Lejaren Hiller, di Stefan Kotska o quella di Marc Battier).

(*) Abbiamo dunque in comune finalità e metodi con la Computer Music Newsletter edita da Jerome Wenker, da dove abbiamo ripreso le parole-chiave, esprimendo i nostri ringraziamenti.

Rarissime le modificazioni intervenute nei testi ricevuti: esso ci sembravano necessarie qualche volta per render più omogenea la presentazione di referimenti bibliografici e in casi eccezionali eravamo costretti di condensare testi troppo lunghi.

Teniamo a ringraziare Gisella Belgeri e Italo Gomez dell'Autunno Musicale a Como ed anche il segretariato del Département d'Informatique dell' Université Paris VIII - Vincennes per l'aiuto datoci nella realizzazione del nostro progetto.

Jacques Arveiller
Marc Battier
Giuseppe G. Englert

Note sulla presentazione:

1. Le linee a capo di ogni voce indicano nell'ordine: recapito privato indirizzo professionale, eventualmente l'appartenenza a un gruppo.
2. I titoli dei paragrafi sono abbreviazioni delle domande che all'origine erano più ampiamente formulate.
3. A destra delle pagine la colonna contiene, al livello di ogni informazione, una o più parole-chiave il cui significato è elencato qui sotto:

GMT	Soggetto generale o molteplice
MEA	Codificazione musicale analogica
MEV	Codificazione musicale visuale
MEK	Codificazione musicale su mezzi perforati
MPrC	Musica stampata dal calcolatore
MPeC	Musica eseguita dal calcolatore
MCC	Composizione musicale con calcolatore
CAMA	Analisi musicale con calcolatore
CAMD	Documentazione musicale con calcolatore
CAME	Educazione musicale con calcolatore

**répertoire /
repertory /
repertorio**

APPLETON Jon H.

P.O. Box 187, Norwich, Vermont 05055 USA

Director, Bregman Electronic Music Studio, Dartmouth College,
Hanover, New Hampshire 03755 USA

Computer Research Group; Thayer School of Engineering

oeuvres/works/opere _____

Zoetrope, 1974
(Dartmouth Digital Synthesizer)

Work in Progress

MPeC

MPeC

programmes/programs/programmi _____

NXPL
(A special purpose language written by Cameron JONES for use on Nova minicomputer to run a digital synthesizer designed by Sydney ALONSO)

DARTMOUTH MUSIC LANGUAGE
(A language for composers written by Paul TOBIAS which simplifies NXPL for users)

textes/writings/testi _____

APPLETON, Jon H., PERERA, Ronald C., ed.
THE DEVELOPMENT AND PRACTICE OF ELECTRONIC MUSIC
Prentice-Hall, Englewood Cliffs, 1975.

-----, ALONSO, Sydney, JONES, Cameron
A SPECIAL PURPOSE DIGITAL SYNTHESIZER FOR THE COMPOSITION, PERFORMANCE AND INSTRUCTION OF MUSIC.
to be published in Computers and the Humanities,
1975.

6/75

Appleton Jon H.

activité/activity/attività _____

Working with a special, inexpensive digital synthesizer
as described above and helping other composers gain
experience in composing music with computers

biographie/biography/biografia _____

1939 born in Los Angeles, California
1957-61 B.A. Reed College, Portland, Oregon
1963-65 M.A. Musical Composition, M.A., University of Oregon
1965-66 special studies Columbia-Princeton Electronic Music
Center
1967- Director, Bregman Electronic Music Studio, Dartmouth
College

6/75

15, boulevard Saint Germain, 75005 PARIS, FRANCE

Département d'Informatique, Université Paris VIII - Vincennes,
route de la Tourelle, 75571 PARIS CEDEX 12, FRANCE

Groupe Art et Informatique de Vincennes (GAIv)

oeuvres/works/opere

Modules de Sproutch, pour choeur mixte et un instrument soliste, 1971
(Programmes SPROUTCH 1A et 1B)

MCC
MPrC

Le Palais Royal, pour petit orchestre (2Fl,Hb,Cor,As,
Fgt,Vib,Org,P,2Perc), 1972
(Système LPR)

MCC
MPrC

Les Petits Obliques, pour piano et vibraphone, 1974
(Programme SIMSIM 3.2)

MCC

Puterville, pour piano à quatre mains, 1975
(Programme STUCK/STOCK 1)

MCC

Paire de Lacs, pour deux exécutants, 1976
(Contrôle de synthétiseurs par ordinateur INTEL 8080 et dispositifs analogiques et digitaux divers)

MCC
MPeC

programmes/programs/programmi

Nombreux programmes musicaux depuis 1969, parmi lesquels :

Famille SPROUTCH (Système de PRogrammation UTilisable pour des CHanteurs), 1971, ALGOL 510, ordinateur CAE510

MCC
MPrC

Système LPR, 1972, ALGOL 510, ordinateur CAE510

MCC

Famille SIMSIM (SIMulation de Situations d'IMprovisation), 1973, ALGOL 510, ordinateur CAE510

MPrC
CAMA
MCC

STUCK/STOCK, 1975, FORTRAN, ordinateur Télémécanique T1600

MCC

textes/writings/testi-

ARVEILLER, Jacques.

"SIMSIM : UN PROGRAMME QUI SIMULE L'IMPROVISATION"
in T-5 THE RATIONAL AND IRRATIONAL IN VISUAL RESEARCH TODAY, Galerija Suvremene Umjetnosti, Zagreb, 1973.

CAMA
MCC

"UNE APPROCHE INFORMATIQUE DE SITUATIONS D'IMPROVISATION"
Communication au colloque "Créativité Artificielle?",
SIGMA 9, Bordeaux, 1973.

CAMA
MCC

"L'INFORMATIQUE MUSICALE, QU'EST-CE QUE C'EST ?"
in ART ET ORDINATEUR, I.S.E.L.P., Bruxelles, 1974

GMT

activité/activity/attività-

Activité compositionnelle et analytique, d'exécutant au sein du GAI (dispositifs transportables), activité pédagogique à PARIS VIII ("Musique et Informatique") depuis 1971, réalisation du périodique ARTINFO/MUSINFO depuis 1971.

Travail en cours : élaboration de modèles de processus d'improvisation dans des langages dérivés de LISP (Conniver, VLISP)

biographie/biography/biografia -

- 1944 né à Monaco
1961-68 études de médecine
1969 participation à la fondation du GAI
1969- études d'informatique à Paris VIII et spé. de psychiatrie
1971- chargé de cours à Paris VIII (Depts. d'Informatique et de Musique)

AUDIOIRE Louis

44 rue du Roi de Sicile, 75004 Paris, FRANCE

Département Informatique, Université Paris VIII - Vincennes,
route de la Tourelle, 75571 Paris cedex-12

Groupe Art et Informatique de Vincennes, Université Paris VIII

programmes/programs/programmi

ZIZIK 1
(programme FORTRAN d'édition de partitions graphiques
sur table traçante)

MPrC
CAME

activité/activity/attività

Projet: construction d'un périphérique d'ordinateur de type clavier instrumental et implantation d'un microprocesseur dans le but d'informatiser certaines des manipulations du studio électroacoustique.

MEK

Développement du système ZIZIK de génération de partition graphique sur table traçante.

MPrC

Recherche graphique de déformation de figures fermées par application du calcul des coefficients de Fourier, sur table traçante ou écran cathodique.

GMT

Utilisation du système COLORIX d'animation de formes colorées sur écran TV.

GMT

biographie/biography/biografia

1945 né à Massay, Cher (France)
1970-75 études de mécanique, d'électronique et
d'informatique
licence et maîtrise d'informatique

11/76

BATTEN Trevor

O.Z. Voorburgwal 158, Amsterdam, Nederland

oeuvres/works/opere —————

Study: Stockholm - Summer '74, 8'30"
(stereo tape, E.M.S. Stockholm)

MPeC

activité/activity/attività —————

Hate digital computers for their sequential and nit-picking accuracy - prefer programming sophisticated analog equipment (with real patch-cords)

GMT

Am interested in the possibilities and results of syntactic manipulation of description languages, and the distortions (both positive and negative) when mapping from one description language to another.

Believe that if it can be proved that Beethoven was a good composer and that Beethoven was not a good composer then Western science will collapse.

At present working on autonomous analogue sound-structure. In october ('75) intend to begin work with electronic video synthesis, with the intention of building integrated audio-visual structures.

GMT

biographie/biography/biografia —————

1945 born in England
1962-69 studied visual art at various english art colleges
1967 produced first computer-assisted graphic (pseudo random walk on square matrix)
1970-72 part-time lecturer in Printmaking, Sunderland Polytechnic, England
July 1972 Exhibited computer produced graphic at '3rd International Print Biennale', Bradford, England
since October 1972, involved with 'Cross-media Mapping Project', Institute voor Sonologie, Utrecht

6/75

16 rue Moreau, 75012 Paris, France

Département Musique, Université PARIS VIII - Vincennes,
route de la Tourelle, 75571 Paris cedex-12, France

Groupe Art et Informatique de Vincennes, Université Paris VIII

œuvres/works/opere

Vox, 1972, pour voix, vibraphone et percussions

MCC

Composition en Bleu, 1976, 6'
bande magnétique 2 canaux

MPeC

Cosa Materiale, 1976, durée indéterminée
commande de dispositifs électroniques par un
mini-ordinateur en musique électronique vivante

MPeC

programmes/programs/programmi

VOXVVP

MCC

ALGOL 510, ordinateur CAE 510
(le programme calcule et imprime une partition pour
3 instruments au moyen d'un filtrage d'aléatoire)

ICOSA - RE ICOSA

MPeC

langage INTELGREU V2 de Patrick GREUSSAY,
mini-ordinateur INTEL 8008
(commande de synthétiseurs par un convertisseur D/A.
RE ICOSA utilise l'interface de 8 convertisseurs
D/A de Christian COLERE)

VIDEA

MCC

langage LSE, ordinateur TELEMECANIQUE T-1600,
sortie sur périphérique de visualisation COLORIX
de Louis AUDOIRE et Roger TANGUY
(volet visuel d'une recherche image et son)

10/76

textes/writings/testi—

BATTIER Marc
MUSIQUE ET INFORMATIQUE: UNE BIBLIOGRAPHIE INDEXEE
Département Musique, Université Paris VIII, 1976.
172p.

activité/activity/attività—

- développement de programmes de réalisation sonore et visuelle, à l'aide de processus de génération formels;
- participation à l'activité de synthèse hybride en musique électronique vivante, avec le Groupe Art et Informatique de Vincennes;
- préparation d'une thèse de doctorat sur l'évolution des formes et des modèles compositionnels en musique électroacoustique. En particulier, les programmes MURMUR (work in progress) tentent une articulation des modèles formels issus du travail informatique avec les autres modèles, naturels ou culturels proposés au compositeur aujourd'hui.

MCC
MPeC

MCC

biographie/biography/biografia—

- 1947 né à Brive-la-Gaillarde, France
1965- cours de pratique instrumentale et de théorie musicale
1969-72 cours d'informatique musicale avec Patrick Greussay;
pratique musicale collective avec G.G. Englert
1972-76 concerts de bandes magnétiques à Paris; musiques
d'exposition
concerts de musique électronique vivante à Paris et
New York
enseigne depuis 1972 la musique électroacoustique à
l'université Paris VIII; cours de composition de
Darmstadt 1976

10/76

6, avenue Marcel Doret, 75016 Paris, France

Compagnie Honeywell Bull, Paris
Centre National d'Etudes des Télécommunications,
Issy-les-Moulineaux

Fondateur du Groupe BBK (Barbaud, Brown, Klein)

oeuvres/works/opere—

Oeuvres principales:

La Boussole des précieux, 1962

MCC

Nonetto in forma di triangolo, 1963

MCC

French Gagaku, 1969

MCC

Machinamentum firmiense, 1970

MCC

Credoc, 1967

MCC

Hortulus coelicus, 1974

MCC

plus une multitude d'oeuvres apparemment moins
importantes

en collaboration avec Frank BROWN et Geneviève KLEIN
(oeuvres signées BBK):

TERRA IGNOTA VBI SVNT LEONES, 1974

MCC MPeC

TERRA IGNOTA VBI SVNT SERPENTES, 1975

MCC MPeC

TERRA IGNOTA VBI SVNT TIGRES, 1975

MCC MPeC

TERRA IGNOTA VBI SVNT AVES, 1975

MCC MPeC

plus une multitude d'oeuvres réunies sous le titre:

MUSICA AD VSVM PLEBIS

MCC MPeC

6/75

disques/records/dischi

Mu-Joken & French Gagaku
"Inédits de l'ORTF" distribution BARCLAY

MCC

programmes/programs/programmi

CORPUS

PRESTO

DVOBUS

GRANAD

WALZER

PATAGO

POLONA

Musique de danse

LEONES

Contrepoin micro-intervalles à 18 parties

SERPENTES

Contrepoin à 9 parties en micro-intervalles

AVES

Contrepoin "à géométrie variable"

Tous ces programmes sont des programmes de composition artificielle: ils sont prolongés par un programme d'échantillonnage AVDITV élaboré par Geneviève KLEIN et Frank BROWN. Le résultat final, recueilli à la sortie du convertisseur, est signé BBK.

textes/writings/testi

BARBAUD, Pierre
LA MUSIQUE, DISCIPLINE SCIENTIFIQUE.
Dunod, Paris, 1966. 106p.

MCC

activité/activity/attività

J'exploite mes programmes, en particulier les trois derniers de la liste ci-dessus, en vue de différentes manifestations, concerts, etc. Sonorisation du GRAND PRISME de Nicolas Schöffer (inauguration le 15 octobre 1975, chapelle de la Sorbonne).
Disque en préparation chez Adès.

UTOPIES: institution du paiement de l'impôt post-mortem pour les compositeurs, eu égard au fait que l'Etat le perçoit non seulement de notre vivant, mais encore pendant cinquante ans après notre mort sur nos droits. Dissolution de différentes institutions telles que la FAMILLE, la CAVMU et en général la SECURITE SOCIALE, les ASSOCIATIONS DE PARENTS D'ELEVES, qui entravent la liberté du compositeur.

Droit du port d'arme pour les compositeurs.

Privation des droits civiques pour les pères de famille.

Le LATIN, langue officielle de l'Europe.

BEAUCHAMP James W.

Associate Professor, Music Bldg., University of Illinois,
Urbana, Illinois 61801, USA

programmes/programs/programmi —————

TONEAN

Written in FORTRAN

Analysis and synthesis of musical instrument tones. The basic procedures upon which this program is based are described in the book MUSIC BY COMPUTERS edited by H. von FOERSTER and myself.

MEA
MPeC

textes/writings/testi —————

BEAUCHAMP, James W.

"A COMPUTER SYSTEM FOR TIME-VARIANT HARMONIC ANALYSIS AND SYNTHESIS OF MUSICAL TONES."
in MUSIC BY COMPUTERS, Heinz von Foerster and James Beauchamp, ed., John Wiley and Sons, New York, 1969. 19-62.

MEA
MPeC

"TIME-VARIANT SPECTRA OF VIOLIN TONES."
Journal of the Acoustical Society of America 56, 3, 1974. 995-1004.

MEA

HILLER, Lejaren A., Jr., BEAUCHAMP, James W.
"RESEARCH IN MUSIC WITH ELECTRONICS."
Science 150, Oct. 8, 1965. 161-169.

MEA
MPeC
MCC

6/75

BECKWITH Sterling R.

Box 244, North Salem, New York 10560 USA

257 Winters College, York University, 4700 Keele street,
Downsview, Ontario, Canada M3J 1P3

Director, York Interactive Music Project

oeuvres/works/opere —————

Works produced using the York Interactive
Music System:

Cycling, a pattern piece by Michael ROSS

MPeC

Serendipity, a systems programmer's nightmare
of indeterminate length, program by Michael ROSS

MCC

Gamelan, a pattern piece by Michael ROBINSON

Heptaphrygia, a pattern piece by Michael ROBINSON

Numerous exercises and test-pieces by various
authors, ages 9-49

programmes/programs/programmi —————

EASY CODE

MCC

PDP-10 computer with special peripherals
Interactive real-time composing and performing of
notated or procedurally generated musical structures,
providing special facilities for individualized
storage and identification systems, individual
design of scales and other notational modes, and a
repertoire of pre-coded operational tools designed
to aid rapid mastery of the principles of melodic,
rhythmic, contrapuntal and harmonic transformation
through trial-and-error dialog via typed, gestural,
and graphic control of sonically limited music output.

CAME

CAMA

8/75

cont.

This system has been successfully tested through classroom use in elementary, junior and secondary schools.

Other advanced system modules, such as SONIC SPACE (large-scale procedural structure-building in the manner of simple process-simulation languages), SONIC PATTERN (designed for evolving-ostinato structures), SONIC PIX (variable graphic representation of melodic structures), and SONIC FUGUE, as well as rudimentary choice-systems simulating algorithmically some of the skills of traditional music-theory exercises, have also been implemented in compatible format.

The entire system is designed and engineered for maximum simplicity and ease of operation in a school setting, but is also well adapted for research in musical perception, and as a tool for analysis-through-synthesis of existing musical works.

textes/writings/testi —

BECKWITH, Sterling R.

"COMPOSING COMPUTERS FOR KIDS -- A PROGRESS REPORT."
Les Cahiers Canadiens de la Musique/The Canada
Music Book, Automne-Hiver 1974/Autumn-Winter 1974.
149-154

CAME MCC

"TALKING MUSIC WITH A COMPUTER."
Symposium, Spring-Summer 1975.

CAME MCC

"THE WELL-TEMPERED COMPUTER."
"DESIGNING A LEARNING ENVIRONMENT FOR MUSIC."
Above two articles now in process of publication

activité/activity/attività—

1. Analysis of the structure of rhythmic expectation in a group of selected melodies by J.S. BACH, using the York Interactive Music System as an analytic-synthetic tool.
2. Design of a compact portable music teletype suitable for use with a remote computer and the EASY CODE special-purpose music software, by school-age users, and especially by physically handicapped children. (Part of an integrated concept of special music hardware and software developed for the York Interactive Music Project.) Would welcome inquiries and assistance from industry or other research agencies in a position to help with design and manufacturing problems.
3. An essay on the relation and possible contributions of computer-aided music processing, via high-level languages, to the current developments in artificial processing of natural languages. Tentative title: Computational Linguistics and Musical Thought.

biographie/biography/biografia —

Born New York 1931, studied in U.S. and Europe active as conductor, singer, musicologist, currently Associate Professor of Music and Humanities, York University, Toronto, Canada

BERG Paul

IBB laan 41 K397, Utrecht, Holland

Institute of Sonology, Plompetorengracht 14-16, Utrecht, Holland

oeuvres/works/opere —————

Six Loaves to Feed a Family of Five for a Week for
2-track tape, 1974, 10'30", a composition of sound
strings produced using the POD5 Computer Sound
Synthesis and Composition Program of Barry Truax

MPeC

They Speak of Singing for organ, 1974

MCC

Reportage for 2-track tape, 1975. Unedited recording
of real-time output of ASP (Automated Sound Programs)

MPeC

MCC

Merriweather's Guide to Plants and People for
2-track tape, 1975. Edited output of ASP

MPeC

Many People Looked at Iran and Saw Desert for
2-track tape, 1975. Output of ASP that was processed
in an analog studio

MPeC

programmes/programs/programmi —————

ASP

MACRO-15, PDP-15 Computer

MPeC

A set of 22 digital sound synthesis programs which
calculate and output sound in real-time. Programs
designed as number manipulation and distribution
systems without explicit reference to musical or
acoustical parameters. Users specify only a start
number for each program. Once begun, a program
continues producing sound until externally halted.
(Listing available)

MCC

6/75

biographie/biography/biografia —

- 1949 Born in St.Paul, Minnesota, USA
1968-72 Studied, among other subjects, organ at the Oberlin College Conservatory
1972-73 Studied at the University of Illinois School of Music, Urbana
1973 At the Institute of Sonology, Utrecht. Mainly concerned with computer-related problems

6/75

5096 Straxpocket Ln., Westerville, Ohio 43081 USA

Algorithm Research; Foundation for the development of
computer music and graphics

oeuvres/works/opere

Dihedra, 1974, 7'55"
(unpublished)

MCC

programmes/programs/programmi

DIHEDRA

Program and sonic realization: California Institute
of the Arts, Buchla 200S synthesizer, Nova 1200
minicomputer

Generates formal music structures which, due to
stochastic functions, vary in their details, but
remain constant with respect to form

MCC

activité/activity/attività

I recently concluded a translation of DIHEDRA
from BASIC to FORTRAN IV. The result is run on
a PDP-11/45 controlling a Vector General display
unit. The system will be used to implement an
animated computer graphic score for the above
composition.

CAMA
CAMD

My major interest at this point involves the study
and programming of a music/artificial intelligence
system. Very briefly, the system will be adaptable
to many compositional tasks and the user will be
free to add to the program or simply utilize what
is given. In this way, the knowledge base (long-term
memory) will be expandable. Some portions of the
system, as it stands today, are simulations of
human musical behavior, while others are less
accurate in that sense, and use what might be
considered 'artificial' methods and models.

MCC
CAMA
CAMD
MPeC

cont.

Although work on the piece began some 6 months ago, I still consider it to be in the sketch stages. Much inquiry is still needed into both human musical processing and artificial models which reflect human behavior. I suspect that I will be in the process of constructing the theory and sonic realizations for some months to come.

biographie/biography/biografia

1954 born Columbus, Ohio
1962-70 studied classical guitar techniques under John
 McCORMICK
1972 studied composition at Cal. Inst. of the Arts under
 James TENNEY.
1973-74 studied composition, mathematics, computer science, etc.
 independently (at CalArts); Studies in general systems
 theory, aesthetics, and phenomenology with instructor
 Jivan TABIBIAN.
1974- presently at Ohio State University majoring in computer
 science with relaxed application to music. Special
 studies advisor is Charles CSURI (director of O.S.U.
 Computer Graphic Research Center).

BOODY Charles G.

1028, South Walnut, Sherman, Texas 75090, USA

Department of Music, Austin College, Sherman, Texas 75090, USA

programmes/programs/programmi

INDEX

A program to generate indicies from journals.
Author, subject, and title indicies are available.
Subject index is user assigned, and by mutually
exclusive categories only. Written in FORTRAN IV
for CDC 6600. Listing available.

CAMD

IVESDEX

An extension of the above program that generates
similar indicies but allows each item to be multiply
listed in the subject listings. Listing available.

CAMD

A variety of integrated simple analysis programs
for counting pitches, rhythmic patterns, pitch motion and
similar matters within melodic material encoded in
Ford-Columbia Music Representation. Written in FORTRAN IV
and SCNBOL4. Interested persons are invited to communicate
about these.

CAME

INTERVAL

A CAI drill program giving elementary theory
students practice in recognition of harmonic
intervals in a variety of keys and clefs.
Statistics are compiled for use by student or
instructor. Written in APL. Listing available.

CAMA

SCALE

A CAI drill program assisting the user to construct
major, minor (all kinds) or modal scale patterns
starting on any given note. User options are
available to vary the complexity and statistics
are compiled for instructor and student. Written
in APL. Listing available.

CAME

textes/writings/testi —————

BOODY, Charles G.

NON-COMPOSITIONAL APPLICATIONS OF THE COMPUTER
TO MUSIC: AN EVALUATIVE STUDY OF MATERIALS
PUBLISHED IN AMERICA THROUGH JUNE OF 1972.
Ph.D., University of Minnesota, 1975. 186p.
- Xerox University Microfilms N° 75-27,135.

GMT
MEV
MEK
MPrC
CAMA
CAMD

activité/activity/attività —————

A computerized index of the score and record library
Hopefully the programs will be generalized sufficiently
to be useful for others.

CAMD

Development of further interactive CAI programs for music
theory.

CAME

Utopial: to aid in the development of a central repository
of data and information about computerized music analysis
and printing. The dissertation mentioned above describes
this need and outlines in some detail what should be done.
Such a step is vitally necessary if computer aided music
printing and analysis are to become realities.

GMT MEA
MEV MEK
MPrC
CAMA
CAMD

biographie/biography/biografia —————

- 1939 born Dawson, Minnesota, USA
1957-61 B.A. degree, Macalester College, St Paul, Minn.
Major Music.
1961-65 Public school music instructor at various schools
in Minnesota
1965-70 post-graduate work. University of Minnesota M.A.
in musicology 1968. Computer background developed.
Taught grad. seminar in musicological applications
of the computer to music.
1970-75 instructor of Music Austin College. Ph.D. (from
U. of Minnesota) 1975.
development of CAI music theory programs.

BRÜN Herbert

307 S. Busey, Urbana, Illinois 61801, USA

School of Music, University of Illinois

oeuvres/works/opere

Sonoriferous Loops, for flute, trumpet, double-bass, xylophone, marimba, percussion, two-channel stereo tape, 1964, 14'

MCC MPeC

Non Sequitur VI, for flute, violoncello, harp, piano, two set of percussion, two-channel stereo tape, 1966, 13'30

MCC MPeC

Plot for Percussion, for solo percussion, 1967, 7'30

MCC MPrC

Touch and Go, for solo percussion, 1967, 10'30

MCC MPrC

Stalks and Trees and Drops and Clouds, for solo percussion, 1967, 7'30

MCC MPrC

Infraudibles, composition of and with computer-synthesized sounds on tape, 1967, 8'30

MCC MPeC

Mutatis Mutandis, composition for interpreters, 1968, open duration

MCC MPrC

textes/writings/testi

BRÜN, Herbert

GMT

"CHAOS AND ORGANIZATION."

Institute of Contemporary Arts Bulletin 166, London
1967. 8-11

"FROM MUSICAL IDEAS TO COMPUTERS AND BACK."

GMT

in THE COMPUTER AND MUSIC, Harry B. Lincoln, ed.,
Cornell University Press, Ithaca, 1970. 23-36

6/75

cont.

- "INFRAUDIBLES."
in MUSIC BY COMPUTERS, Heinz von Foerster et
James Beauchamp, ed., John Wiley and Sons, New York,
1969. 117-121. GMT
- "MUTATIS MUTANDIS."
Numus West 4, 1973. 31-34. GMT
- "MUZYKA I INFORMACJA."
Res Facta III, Krakow, 1969. 172-191. GMT
- "PROBLEME DER VERSTÄNDINGUNG."
Hifi Stereophonie 6, Karlsruhe, 1973. 587-590. GMT
- "TECHNOLOGY AND THE COMPOSER."
Interpersonal Relational Networks, Heinz von
Foerster, ed., CIDOC Cuaderno 1014, Cuernavaca
(Mexico), 1971. 1-25. La Revue Musicale 269-269, 1971. GMT
- "... TO HOLD DISCOURSE, AT LEAST WITH A COMPUTER..."
Guildhall School of Music and Drama Review, London,
1973. 16-21. GMT
- "SUBSTITUTE OR ANALOGY?"
Nutida Musik 7, Stockholm, 1965-66. 27-31. GMT
- ÜBER MUSIK UND ZUM COMPUTER.
G. Braun, Karlsruhe, 1971. 121p. GMT

activité/activity/attività

- a) Supported by the Research Board of the University of Illinois, the School of Music, and the Center for Advanced Computation (CAC), I have designed and constructed a composer-computer interface which will allow me to enter the hitherto inaccessible realm of composition in precise wave form (in contradistinction to the existing techniques of approximating desired sounds with fairly suitable waveforms).

MCC
MPeC

6/75

cont.

Due to problems with the delivery times of some hardware, and due to substantial changes in the computer installations at CAC, the project took longer than expected, but is now in its final "debugging" state.

b) Supported by the Research Board and the School of Music, I have used the DCL Computer IBM 360/75 and the Calcomp Plotter for research in, and the composition of graphics which will stimulate and motivate interpreters and performers to use them as structural models for creations in their chosen mediums, music, dance, poetry, etc. By now the results of this work have accumulated texts and explanations, and a few publications.

MPrC

c) In conjunction with the above mentioned projects I have begun to develop some formalisms by which I hope one will be able to describe musically significant waveforms and graphically significant configurations of line segments and shapes; and also some formalisms that deal with the transformational properties of either a waveform or a visual configuration. Encouraged by some colleagues in the departments of Mathematics and Electrical Engineering, I call them, with trepidation, possible premises for an "arithmetic" of waveforms and line configurations, that may, in turn, be the groundwork for a contemporary theory of composition. Not being a mathematician, I will need much time and effort so that the result be a respectable presentation of the matter.

GMT

biographie/biography/biografia

Born 1918 in Berlin, Germany, studied at the Jerusalem Conservatory of Music and with Stefan Wolpe and Frank Pelleg. Further studies included work at Columbia University, NY. From 1955-61, in addition to his activities as a composer, he conducted research concerning electro-acoustics and electronic sound production in regard to their possibilities in the field of musical composition: Paris, Cologne, Munich. During this period he also worked as a composer and conductor of Music for the theatre, gave lectures and seminars particularly emphasizing the function of music in society, and did a series of broadcasts on contemporary music. In 1963 he came to the School of Music of the University of Illinois as Research Associate, primarily to do research on the significance of computer systems for the composition of music, and is presently an Associate Professor of Music there.

6/75

207 Gloucester Ave., Oakville, Ontario, Canada

Institute of Sonology, Plompetorengracht 14-16, Utrecht,
Netherlands

oeuvres/works/opere

Tribsanden for voice, slides, and live electronics,
1973, cir. 15'
(a "sound poem" with computer permuted text)

MCC

For Dance for 4-track tape, 1975, 12'05"
(Uses sound synthesis/composition program POD6,
written by Barry TRUAX: real-time implementation
of frequency modulation using digital synthesis)

MEK
MPeC
MCC

ASP 12 at 2000 for 2-track tape, 1975, 9'00"
(Uses ASP programs, developed by Paul BERG: digital
synthesis, where samples derive from mathematical
model)

MEK
MPeC
MCC

programmes/programs/programmi

HYBRID
FORTAN IV & MACRO 15, PDP 15 computer (Institute
of Sonology)
To enable control of Institute's analogue studios
by the PDP 15 computer. Outputs 8 channels of
D.C. functions. Conversational, real-time

textes/writings/testi

BUXTON, William
A PRACTICAL MANUAL FOR POD6.
Institute of Sonology, Utrecht, 1975.

A PRACTICAL MANUAL TO THE SOUND SYNTHESIS/COMPOSITION
PROGRAMS POD6 WRITTEN BY B. TRUAX
to be published fall of 75

7/75

activité/activity/attività -

Besides composition, my prime interest in computers, as they relate to music, is to overcome some of the communication problems that exist in various aspects of the field. The development of musically powerful systems (hardware and software) which minimize the problems of man-machine interaction is my goal. In this light, I am most interested in interactive systems, which function in real-time. The documentation of systems is also important to me. The goal here is to minimize the amount of time that a potential user must invest in a program, before being able to judge its applicability to his needs.

biographie/biography/biografia -

- 1949 born in Edmonton, Canada
 B. Mus. from Queen's University, Kingston, Canada
1971-73 helped set up, and manager of Queen's University
 Electronic Music Studio
1973-75 at Institute of Sonology, Utrecht
 Active in composing, technical writing, and
 performing. Performances in Canada, Belgium, France
 and Netherlands. Guest composer EMS Stockholm,
 spring 1975

1414 E. University
Bloomington, Indiana 47401 U.S.A.

Wrubel Computing Center
Indiana University
Bloomington, Indiana 47401, U.S.A.

oeuvres/works/opere -----

Three Pieces for Three Winds (flute, clarinet,
flugelhorn), 1974, 10 min.
composition aided by program MUSC, printing
by programs JANUS and SMUT

MCC
MPrC

programmes/programs/programmi -----

SMUT 1.2 in FORTRAN IV (almost completely ANSI
standard). System for Music Transcription:
a music printing program, more fully automated
than most. Source program, description
(from Computers and the Humanities, Vol. 8 no. 3)
and User's Guide available.

MPrC

JANUS 2.1 in FORTRAN IV (almost totally ANSI
standard). Interfaces MUSIC V-type note cards,
perhaps from a composing program, to SMUT,
automatically fitting rhythm to conventional nota-
tion, generating a graphic score, etc.
Source program and User's Guide available.

MPrC
MCC

MUSC 1.2B in ALGOL-60, CDC 6000 or 7600 or CYBER,
or ALGOL-W, IBM 360 or 370. 12-tone music
composing program that produces output compatible
with MUSIC V and JANUS/SMUT. Source program and
User's Guide available.

MCC

Eight other music-related programs, by D.Byrd
and others, are available

MCC MEK
CAMA MPeC
MPrC

textes/writings/testi -----

BYRD, Donald, TRANSCRIPTION BY PLOTTER,
Random Bits (Indiana U.) 5,9 (May 1970), pp 1,6-8

MPrC

BYRD, Donald, A SYSTEM FOR MUSIC PRINTING BY
COMPUTER, Computers and the Humanities 8,3
(May 1974), pp. 161-172

MPrC

BYRD, Donald, THEY LAUGHED WHEN I SAT DOWN AT THE
COMPUTER -- A Short History of Computer Music,
Random Bits 10,3 (1974), pp. 2, 3, 7.

GMT

activités/activity/attività -----

Working on version 1.2 of SMUT, music printing
program, and planning a major revision to
enable it to handle polyphony. SMUT is intended
primarily to print the output from composing
programs, and with JANUS interface program
constitutes a most automatic system.

MPrC

Working with Gary WITTLICH of the Indiana University
School of Music on a musical keyboard input
system to allow building up a data base of music
for analysis.

MEA

Composing (with MUSC) a piece for solo string
bass.

MCC

One of his interests for many years has been
building a complete and portable computer music
system -- including composition, sound synthesis,
printing, and analysis programs, each capable of
communicating with the others. It is important
that this system be portable so that people with
other hardware won't have to do a lot of busy
work. This system is portable for medium- and
large-scale computers: no real-time or interactive
programs.

GMT

biographie/biography/biografia -----

- 1946 born in Chicago, Illinois
1964-68 studied composition at Indiana University with Bernhard Heiden and Roque Cordero (B.M., 1968)
1969-72 worked as a programmer for Indiana Univ. and for Iannis Xenakis
1973-75 studied computer science at Indiana U. (M.S., 1975)
Been active in computer applications to music since 1968.

6/75

CHAILLOUX Jérôme

4, avenue Foch, 94120 FONTENAY SOUS BOIS, FRANCE

Département d'Informatique, Université Paris VIII, Route de la Tourelle, 75571 PARIS CEDEX 12, FRANCE

Groupe Art et Informatique de Vincennes

œuvres/works/opere

Aucune, mais "l'important, c'est de participer" (Pierre de Coubertin).

programmes/programs/programmi

GR

Macrogénérateur de rythmes pour la commande d'une boîte de rythmes et l'écriture simultanée de partitions.
FORTRAN, ordinateur IBM 370/145, 1972

MCC
MPeC

MUSCAB

Système conversationnel permettant d'exploiter un synthétiseur monodique construit par J.C.Mazeau et H.Oulié.
ordinateur CAB 502B, 1973

MCC
MPeC
CAME

KRWTH

Complexification du précédent.
ordinateur CAB 502B, 1974

MCC
MPeC
CAME

textes/writings/testi

CHAILLOUX, Jérôme
"KRWTH"
Artinfo/Musinfo 20

MCC
MPeC
CAME

activité/activity/attività

Je ne fais guère de musique, mais j'aime les musiciens et je participe, ce qui est l'essentiel.
Mes activités présentes sont plutôt orientées sur des réalisations en logiciel et système (écriture récente d'un interprète et d'un

9/76

cont.

compilateur VLISP 10), sur les problèmes de vision (adaptation du monde informatique aux aveugles) et sur la construction d'une Machine-LISP, bâtie autour d'un microprocesseur et munie de périphériques musicaux.

MPeC

biographie/biography/biografia

- 1949 né à Créteil, Seine, France.
 études de Médecine
1975 études d'Informatique à l'Université Paris VIII-Vincennes
 maîtrise d'Informatique

9/76

144 rue du Maréchal Leclerc, 94410 SAINT MAURICE, FRANCE

Maître de Recherche, C.N.R.S., 27 rue Paul Bert, 94200 IVRY

Responsable de l'Equipe de Recherche sur l'Analyse et la Transcription des Tablatures par Ordinateur (E.R.A.T.T.O.)

programmes/programs/programmi-----

Etudes musicologiques préalables au traitement informatique (voir programmes mentionnés par Henri Ducasse).

textes/writings/testi-----

CHARNASSE, Hélène et DUCASSE, Henri
"DE L'EMPLOI DE L'ORDINATEUR POUR LA TRANSCRIPTION DES TABLATURES."
Revue de Musicologie 57, 2, 1971. 107-133.

"UNE NOUVELLE APPLICATION DE L'INFORMATIQUE AUX SCIENCES HUMAINES : LA TRANSCRIPTION DE MUSIQUE ANCIENNE."
Le Courrier du C.N.R.S. 8, Avril 1973. 25-29.

-----,(eds.)
INFORMATIQUE MUSICALE. JOURNEES D'ETUDES 1973.TEXTES DES CONFERENCES. E.R.A.T.T.O.
C.N.R.S., Paris, 1973.

CHARNASSE, Hélène
"TRANSCRIPTION AUTOMATIQUE DE TABLATURES : INTERETS, LIMITES."
in INFORMATIQUE MUSICALE. JOURNEES D'ETUDES 1973. TEXTES DES CONFERENCES. E.R.A.T.T.O.
C.N.R.S., Paris, 1973. 25-47.

"MUSICOLOGIE ET INFORMATIQUE ; LES GRANDS AXES DE RECHERCHE."
Informatique et Sciences Humaines 19, Institut des Sciences Humaines Appliquées, Université Paris-Sorbonne, Dec.1973. 19-31.

6/75

cont.

CHARNASSE, Hélène et DUCASSE, Henri
"AUTOMATED TABLATURE TRANSCRIPTION."
Computational Musicology Newsletter 2, 1, Mar. 1975. 9-10.

"L'INFORMATIQUE MUSICALE EN 1974."
Journal de la Société de Statistique de Paris

Equipe E.R.A.T.T.O.
SPECIMEN DE TRANSCRIPTION AUTOMATIQUE. HANS GERLE. TABU-
LATUR AUFF DIE LAUDTEN. NUEREMBERG. 1533.
C.N.R.S., Paris, 1974.

GERLE, Hans
TABULATUR AUFF DIE LAUDTEN, NUEREMBERG, 1533, TRANSCRI-
TION AUTOMATIQUE, PAR LE GROUPE E.R.A.T.T.O.
Société Française de Musicologie, Paris
-Fascicule I, Préludes, 1975
-Fascicule II, Chansons et pièces allemandes, 1975
-Fascicules III, IV, V, à paraître en 1976.

activité/activity/attività

Transcription automatique et édition de notations musicales appellees tablatures (XVI°-XVIII° s.).

6/75

CLOUGH John L.

School of Music, the University of Michigan, Ann Arbor,
Michigan 48105, USA.

textes/writings/testi

CLOUGH, John L.

"COMPUTER MUSIC AND GROUP THEORY."

Proceedings of the American Society of University Composers 4, 1971. 10-19.

"COMPUTER SOUND GENERATION: AN EDUCATIONAL RESOURCE AT OBERLIN COLLEGE." Proceedings of a Conference on Computers in the Undergraduate Curricula: June 16, 17, 18 1970. Center for Conference and Institutes, University of Iowa, Sept. 1970. 1.18-1.19.

"IRMA: AN INTERACTIVE, REAL-TIME, DIGITAL SYSTEM FOR ELECTRONIC MUSIC."

IEEE International Convention Digest, March 1971. 40-41.

"A REPORT FROM OBERLIN."

Computational Musicology Newsletter 1, 1, Feb. 1971. 2-5.

"TEMPO: A COMPOSER'S PROGRAMMING LANGUAGE."

Perspectives of New Music 9, 1, Fall/Winter 1970. 113-125.

TEMPO (TRANSFORMATIONAL ELECTRONIC MUSIC PROCESS ORGANIZER). Language Specifications. 1969. 60p. Available from author.

activité/activity/attività _____

Presently in preliminary stages of project applying artificial intelligence research concepts and techniques to composition of music in classical styles, including the American popular song 1930-1960.

MCC

biographie/biography/biografia _____

1930 born, Boston, Massachusetts, USA
1947-55 attended University of Delaware, Oberlin College and
 Yale University (Mus. M., 1955)
1955-70 Oberlin College, Instructor, Professor of Music Theory
1970- University of Michigan, Professor of Music Theory

6/75

DALMASSO Gilbert

10, rue Bobillet, 75013 PARIS, FRANCE

Professeur de Musique, Ecole de Danse de l'Opéra de Paris,
Place de l'Opéra, 75009 PARIS, FRANCE

Groupe Art et Informatique de Vincennes, Université PARIS VIII

œuvres/works/opere ——————

Pièce pour vibraphone et bande, 1974
(Programme MIPMOP 3 de J.Arveiller, ALGOL 510, ordinateur CAE 510)

MCC
MPeC

Boulevard de Port-Royal, bande, 1975
(Contrôle de synthétiseurs par dispositif digital (générateur de fonctions logiques) et conversion digitale-analogique)

MCC
MPeC

Senate pour deux vibraphones, 1975
(Programme GSYSE, LISP T1600, ordinateur Télémechanique T1600)

MCC

Synthos viderunt, 1975
(Contrôle de synthétiseurs par dispositif digital (générateur de fonctions logiques) et conversion digitale-analogique)

MCC
MPeC

En France avec des piles, pour deux exécutants "live", en collaboration avec Patrick Greussay, 1975
(Contrôle de synthétiseurs par mini-ordinateur INTEL 8008)

MCC
MPeC

Dépilestère, pour deux exécutants "live", 1976
(Contrôle de synthétiseurs par mini-ordinateur INTEL 8080 et par dispositifs analogiques et digitaux divers)

MCC
MPeC

programmes/programs/programmi ——————

GSYSE
LISP T1600, ordinateur Télémechanique T1600
génération de types d'écriture en séquences formelles

MCC

6/76

activité/activity/attività —————

Une grande partie de mon temps est consacrée à la pédagogie de la musique, à la composition, et surtout à la réalisation et à l'exécution "live" de musiques avec ordinateurs, dans le cadre des manifestations du Groupe Art et Informatique de Vincennes.

En dehors de ces activités, je me consacre actuellement de façon plus spécifique à une recherche sur les structures formelles de l'improvisation en musique contemporaine non écrite (thèse de doctorat en préparation sous la direction de Daniel Charles). Cette recherche s'articule avec mon activité informatique en ce que les modèles formels proposés sont élaborés sous forme de programmes VLISP, au département d'Informatique de l'Université Paris VIII.

CAMA

biographie/biography/biografia —————

- 1949 né à Nice, France
- 1957-68 études de piano
- 1968- se consacre au vibraphone (Conservatoire de Nice)
- 1973-74 licence et maîtrise de Musique
- 1975-76 licence d'Informatique (Université de Paris VIII)

6/76

DAL MOLIN Armando

67 Florence Avenue
Oyster Bay, New York 11771, U.S.A.

President, Music Reprographics, Ltd.
69 West Main Street
Oyster Bay, New York, 11771 U.S.A.

programmes/programs/programmi -----

CPS-300 Music Key-Punch used in the Music Reprographics system. The control micro-computer of the CPS-300 was designed by James S. MOFFETT.
programs used in conjunction with the CPS system:

MEK
MPrC

CPS MUSIC INPUT

Graphic FORMATTING and LAY-OUT

Photon PRINTOUT program

TEXT, LYRICS and REHEARSALS input and insertion

Automatic TRANSPOSITION to any key or clef

CORRELATION program for automatic extraction of parts from scores.

All these programs in machine language; Instructions are applicable to D.E.C. PDP-8 computer (any model).

textes/writings/testi -----

DAL MOLIN Armando, MOFFETT James S., VIRTUAL FLIT
at Music Reprographics, 1974

activité/activity/attività -----

A total of 32,000 pages of music engravings completed since 1969. The music pages are produced on order for the music publishing firms of the United States, United Kingdom, Canada and Australia, to date. Current production runs to 1000 pages and more a month.

The Music Fonts for the Photon Textmaster 713-10 were designed by John Daniels under the supervision of A. Dal Molin. There are 200 master drawings for these music fonts.

The current CPS system produces pages of music that are only 80% complete; a certain amount of art work must be added by hand. We intend to keep perfecting our hardware until we can set music that is entirely produced by machine (once it has been keyboarded). In addition we are planning improved input terminals.

biographie/biography/biografia -----

- 1941 graduated (Dott. Ing.) at Regio Politecnico di Milano (Italy).
- 1944 invented first commercially used music typewriter Italian and US patents applied for
- 1949 founded MUSIC TYPOGRAPHERS in New York, N.Y.: first commercial firm to use music typewriters for reproduction of music. It first used a computer for the lay-out of music pages in 1952.
- 1968 founded MUSIC REPROGRAPHICS, Ltd. in Oyster Bay, N.Y.
- 1969 first music produced by the CPS system.

DI GIUGNO Giuseppe

c/o I.R.C.A.M., 31 Rue Saint-Merri, 75004 Paris, France

I.R.C.A.M., 31 Rue Saint-Merri, 75004 Paris

activité/activity/attività -----

A Real-Time Computer Controlled Digital Oscilator Bank
(Istituto di Fisica, Università di Napoli, and
I.R.C.A.M., Paris)

MPeC MCC

A small scale computer controlled digital oscilator bank that provides 256 real time oscilators and four channels of digital-to-audio output has been constructed as a preliminary test system for a more sophisticated and larger scale real-time digital synthesizer, to be constructed for the Electroacoustics Department at I.R.C.A.M. This system has been in operation at I.R.C.A.M. since August 1976. Fine temporal control of the amplitude, frequency, and phase of each virtual oscilator is provided by a PDP 11/40 computer at a 100 KHz data rate. The central feature of the system is single time-shared table lookup digital oscilator and amplitude modulator. In this oscilator the computing time for one sample and its amplitude scaling is 250 nano seconds. A 1K x 12 bit random access memory (RAM) can store any waveform supplied by the user via the computer. This waveform table can be rewritten in 10 milliseconds. A 256 x 24 bit RAM is provided for storing frequency data, another for storing phase data, and a 256 x 12 bit RAM is provided for storing amplitude data. The sampling rate is 4 MHz/(Number of oscilators). The frequency resolution in Hz is 0.256/(Number of oscilators). The number of oscilators is programmed by steps of powers of 2 from 4 to 256.

12/76

Di Giugno Giuseppe

biographie/biography/biografia -----

- 1937 born in Bengasi
1961 "laureato" in physics, Università di Roma
1961-71 research in Elementary Partical Physics
1972-77 research on new types of real-time digital synthesizers controlled by computer

12/76

DODGE Charles

39 Claremont Avenue
New York, N.Y. 10027 U.S.A.

Music Department, Columbia University
New York, N.Y. 10027

In charge of research in the use of computers in electronic sound production at the University.

oeuvres/works/opere -----

Changes

MPeC

Earth's Magnetic Field

MPeC

Extensions for Trumpet and Computer

MPeC

Speech Songs

MPeC

The Story of Our Lives

MPeC

In Celebration

MPeC

disques/records/dischi -----

Changes, Nonesuch H71245

MPeC

Earth's Magnetic Field, Nonesuch H71250

MPeC

Extensions, Composers Recordings Inc. SD 300

MPeC

Speech Songs (excerpts), 1750 Arch Records 1752

MPeC

programmes/programs/programmi -----

In addition to using MUSIC IVBF and MUSIC360, I have created my own synthetic speech analysis and synthesis system. With the help of Godfrey Winham and Kenneth Stieglitz of Princeton University and Howard Eskin, Richard Garland and George Rabinowitz of Columbia Univ.

6/75

Dodge Charles

textes/writings/testi -----

see the liner notes to the two phonograph albums.

activité/activity/attività-----

Composing the final work in what will be an entire LP disk of synthetic speech works based on the poems of Mark Strand.

Project to "musicalize" the radio play Cascando by Samuel Beckett.

Grant from the WNET TV Lab to investigate the "merging" of his synthetic speech compositions with video experiments.

Coordinator of the music part of the International Computer Art Festival for the last three years.

biographie/biography/biografia -----

- 1942 born in Ames, Iowa.
 educated at the University of Iowa and Columbia University. Studied composition with Richard Hervig, Darius Milhaud, Gunther Schuller, Hack Beeson, Chou Wen-chung, Otto Luening and electronic music with Vladimir Ussachevsky and computer music with Godfrey Winham (at Princeton University).
 Numerous awards and commissions for compositions. lectured widely about computer music to audiences in America and Europe.
1972-73 and 1975-76 Guggenheim Fellow
1971-75 President, The American Composers Alliance
1970--.. Assistant Professor of Music, Columbia University.

2, allée des Platanes, BOUSSY 91800 BRUNOY, FRANCE

C.N.R.S., 27,rue Paul Bert, 94200 IVRY, FRANCE

Equipe de Recherche sur l'Analyse et la Transcription des Tablatures
par Ordinateur (E.R.A.T.T.O.)

animateur du groupe "Informatique Musicale" de l'AFCET

programmes/programs/programmi

GEN4

programme de transcription de tablatures allemandes pour
luth (sortie par traceur BENSON)

MEK
MPrC

VER

programme de vérification de la tablature (position des
codes par rapport aux cordes du luth)

CAMA

FREQ

programme de calcul de la fréquence d'apparition des notes
dans une pièce

CAMA

GEN5

programme de transcription de tablature de colachon

MPrC

GEN6

programme de transcription de tablature de harpe galloise

MPrC

textes/writings/testi

CHARNASSE, Hélène et DUCASSE, Henri

MPrC

"DES PRESSES DE PIERRE BALLARD A L'ORDINATEUR."

Revue de Musicologie 54, 2, 1968. 231-244.

CHARNASSE, Hélène et DUCASSE, Henri

MPrC

"DE L'EMPLOI DE L'ORDINATEUR POUR LA TRANSCRIPTION DES
TABLATURES."

Revue de Musicologie 57, 2, 1971. 107-133.

DUCASSE, Henri (ed.)

CAMA

Informatique et Sciences Humaines 19

CAMD

Institut des Sciences Humaines appliquées, Paris, 1973

cont.

CHARNASSE, Hélène et DUCASSE, Henri
"UNE NOUVELLE APPLICATION DE L'INFORMATIQUE AUX SCIENCES
HUMAINES : LA TRANSCRIPTION DE MUSIQUE ANCIENNE."
Le Courrier du C.N.R.S. 8, Avril 1973. 25-29.

GMT

DUCASSE, Henri
"UN PROBLEME DE SAISIE DE L'INFORMATION : LE TRAITEMENT
DES TABLATURES."
in INFORMATIQUE MUSICALE. TEXTES DES CONFERENCES.
C.N.R.S., Paris 1973. 48-65

GMT
CAMA
CAMD

DUCASSE, Henri
"UNE MÉTHODE DE TRAITEMENT AUTOMATIQUE DE LA MUSIQUE
ANCIENNE."
Journal de la Société de Statistique de Paris 3, 1974.
216-221.

MEK
MPrC

activité/activity/attività

Réalisation d'un programme conversationnel sur console graphique
IBM 2250 pour corriger les transcriptions de musique et les éditer
à l'aide d'un traceur graphique.

MEV
MEK

6/75

ENGLERT Giuseppe G.

86bis, Bd Latour-Maubourg 75007 Paris, France

Université Paris VIII - Vincennes, Département Musique
Route de la Tourelle 75571 Paris Cedex 12, France

Groupe Art et Informatique Vincennes, Université Paris VIII

oeuvres/works/opere -----

"Miss Filena Pal at Her Keyboard - a Portrait"
for 10 performers, 1975 (score written by PDP 11/10
computer assisted by composer, program SCORFORTEN
by GGE; realized at S.U.N.Y.Albany)

MCC

"The Mohawk Evening Song" - Painting by Goya
performed by PDP 11/10 computer controlling analog
devices (Moog), with assistance of composer,
program MELANZANE by GGE, duration unlimited
(realized at S.U.N.Y.Albany, 1975)

MCC MPeC

Fragola
pour ordinateur Intellec 8 contrôlant deux synthé-
tiseurs (VCS3) avec assistance manuelle,
programme FRAGOLA de GGE en INTELGREU, durée illim.
(réalisé dans le G.A.I.V., 1976)
Mot 76/1 enregistrement sur bande d'une exécution
de Fragola par l'auteur (durée: 20 min)

MCC MPeC

Les pièces suivantes, réalisées à la S.U.N.Y.Albany en 1976,
sont destinées à "live performance"; pour en faciliter la
diffusion, l'auteur les a enregistrées sur bande :

Purple Triskelion (Mot 76/21) and
Emerald Triskelion (Mot 76/22)
two versions of music composed and performed by
PDP 11/10 computer controlling analog devices,
program BASIL1, duration: 33 minutes

MCC MPeC

Soft Games (Mot 76/23)
music composed and performed by PDP 11/10 computer
controlling analog devices (Moog)
program TEN-OUT-TWO-IN, approx. duration: 24 min.

MCC MPeC

10/76

Englert Giuseppe G.

programmes/programs/programmi -----

FRAGOLA en INTELGREU (de Patrick Greussay) sur ordinateur Intellec 8 : ce programme permet l'exécution "live" de musique à 4 canaux sur l'ordinateur contrôlant deux synthétiseurs.
(listing commenté à paraître dans ART-INFØ MUS-INFØ)

MCC MPeC

BASIL1 et TEN-OUT-TWO-IN
deux programmes en PDP 11/10 ASSEMBLY qui simulent la composition d'une musique et son exécution par contrôle de dispositifs analogiques via 10 convertisseurs D/A (listings available).

MCC MPeC

activité/activity/attività -----

Dans le Groupe Art et Informatique Vincennes recherche de modèles compositionnels, surtout en vue de leur réalisation sur des équipements réduits et transportables. Concerts et "workshops".

MCC

Autre recherche en cours: Pulse width modulation in digital sound synthesis.

biographie/biography/biografia -----

1927 né à Fiesole (Italie) de parents suisses
1945-48 études au Conservatoire de Zürich
1949 établi à Paris: études d'orgue avec André Marchal
1957- organiste, compositeur, interprète m. électronique, production collective de spectacles musicaux uniques (happenings), nouveau théâtre musical,
1970- enseigne à l'Université Paris VIII - Vincennes (département Musique)
1974- membre du Groupe Art et Informatique Vincennes

10/76

FRANCOIS Jean-Charles

538 Amphitheatre Drive, Del Mar, California 92014, USA

University of California at San Diego, Department of Music,
MDVBO 26, Box 109, La Jolla, California 92093 USA

Center for Music Experiment

oeuvres/works/opere

Pièce Coeliaque Madréporienne, Juin 1976, ca 13', bande
(MUSIC V, timbre tuning System de Bruce LEIBIG)

biographie/biography/biografia

1942 born Vichy
1952-62 études Conservatoire de Paris (percussion, écriture)
Co-directeur du Centre de Musique avec G.G. Englert
et Keith Humble
1969-71 percussioniste, Melbourne Symphony Orchestra
1972 chargé de cours, Université Paris VIII
1973- Fellow CME, Assistant professor of Music, CME

10/76

15, rue Montmartre, 75001 PARIS, FRANCE

Département d'Informatique, Université Paris VIII - Vincennes,
route de la Tourelle, 75571 PARIS CEDEX 12, FRANCE

Groupe Art et Informatique de Vincennes (GAIv)

œuvres/works/opere

Fragments Associés, pour piano, 1970
(Programme PAO 2)

MCC
MPeC

Bleus, pour instruments à vent et percussions, 1971
(Programme MLC0)

MCC

En France avec des Piles, pour deux exécutants "live",
1975 (avec Gilbert Dalmasso)
(Contrôle de synthétiseurs par ordinateur INTEL 8008)

MCC
MPeC

OEuvres alternatives pour piano ou piano électrique ou
VCS3 + INTEL 8008 ou mixtes :

MCC
MPeC

Le Plan du Matin, 1976 (Programme BISEQUENCER)

Eclipse, 1976 (Programme BISEQUENCER)

Magellanic Clouds, 1976 (Programme BISEQUENCER)

programmes/programs/programmi

Programmes de composition :

MCC

PAO 1, 1969, ALGOL 510, ordinateur CAE510

PAO 2, 1970, ALGOL 510, ordinateur CAE510

MLCO, 1970, LISP-ALGOL, ordinateur CAE510

Programmes d'analyse harmonique + simulation de processus
de lecture et de compréhension :

CAMA

HARMO-V, 1972, LISP 510, ordinateur CAE510

MULTIPRO, 1972, LISP 510, ordinateur CAE 510

HARMREL, 1973, LISP 510, ordinateur CAE 510

Base de données cognitive compositionnelle :
MUSICREAD, 1974, Conniver, ordinateur CAE 510

CAMA

Composition et improvisation en temps réel :

MCC

BISEQUENCER, 1976, INTELgreu, ordinateur INTEL 8008

MPeC

12/76

textes/writings/testi —————

GREUSSAY, Patrick.

"UN MODELE INFORMATIQUE DE DESCRIPTION DE STRUCTURES
MUSICALES"

Recherches Linguistiques 1, Université Paris VIII, 1972.
89-128.

CAMA

MODELES DE DESCRIPTIONS SYMBOLIQUES EN ANALYSE MUSICALE
Thèse de 3^e cycle, Université Paris VIII, Juin 1973.

CAMA

"S-EXPRESSIONS"

in T-5 THE RATIONAL AND IRRATIONAL IN VISUAL RESEARCH
TODAY, Galerija Suvremene Umjetnosti, Zagreb, 1973.

CAMA

"STRUCTURES DE CONTROLE EN DESCRIPTION SYMBOLIQUE D'ANA-
LYSES MUSICALES"

in INFORMATIQUE MUSICALE. JOURNEES D'ETUDES 1973. TEXTES
DES CONFERENCES. E.R.A.T.T.O., C.N.R.S., Paris, 1973.
177-203.

CAMA

"MUSIQUE : DESCRIPTIONS DE PROCEDURES DE LECTURE, PROCE-
DURES DE DESCRIPTION DE LECTURES, PROCEDURES DE LECTURE
DE DESCRIPTIONS"

Artinfo/Musinfo 19, Université Paris VIII. 1-30.

CAMA

activité/activity/attività —————

Enseignement en Intelligence Artificielle à Paris VIII - Vincennes.
Programmation système T1600, INTEL 8008, PDP 10.
Recherche en sémantique formelle de LISP et langages dérivés.
Candidat au grade de SHODAN en GO.

biographie/biography/biografia —————

1944

Né à Paris dans une famille de musiciens
Etudes de piano, de kazoo et de composition
Etudes de philosophie et de logique (Sorbonne)
Doctorat en linguistique (Vincennes)
Recherches au Laboratoire d'Intelligence Artificielle du
MIT.

12/76

GROSS Dorothy

5601 Riverdale Ave. ,apt 1L
Bronx, New York 10471 U.S.A.

Music Department
Lehman College
Bedford Park Blvd.
Bronx, New York, U.S.A.

Committee on Computers in Music at the City University of New York

programmes/programs/programmi -----

a package of computer programs for music analysis; CAMA
CAL SNOBOL, CDC 6600 computer or
SPITBOL, IBM 370 computer (listings available).
Includes translation series from the MUSTRAN
encoding language and programs for linear,
sonority, thematic, and set analysis.

textes/writings/testi -----

GROSS, Dorothy,
A COMPUTER PACKAGE FOR MUSIC ANALYSIS, Proceedings CAMA
of the Second Indiana University Computer Network Conference on Instructional Computer Applications, Kokomo, Indiana, March 1975.

GROSS, Dorothy,
A SET OF COMPUTER PROGRAMS TO AID IN MUSIC ANALYSIS, Computational Musicology Newsletter, Vol. II, No. 1, 1975 CAMA

GROSS, Dorothy,
A SET OF COMPUTER PROGRAMS TO AID IN MUSIC ANALYSIS, Ph.D. Dissertation, Indiana University, 1975. CAMA

6/75

Gross Dorothy

activité/activity/attività -----

I am presently setting my programs up on the City University of New York computer network so that they may be used by anyone there with access to a terminal.

CAMA

biographie/biography/biografia -----

1946 born in New York, New York
1967 B.A., Brown University
1969 M.M., Manhattan School of Music
1975 Ph.D. in Music theory, Indiana University
1972-74 taught theory and electronic music at State Univ.
of New York, College at Purchase
1974--- teaching theory at Lehman College

6/75

GROSS Robert

Center for Music Experiment, University of California at San Diego,
La Jolla, CA 92093, USA

activité/activity/attività

The Timbre Tuning System: The system implements an approach very similar to its predecessors, Music IV and Music V. One defines instruments or signal processing networks, functions, and notes or parameter value arrays. Notes drive the instruments by providing begin and end times and input values corresponding to parameters such as frequency, amplitude, modulation index and function name. Functions are first generated and stored, then used by instruments at computation time, usually as lookup tables representing time-domain functions, e.g., waveshape, envelope. The number of instruments, functions and notes in operation simultaneously is arbitrary, though practically limited by the speed and size of the computer at hand. The output of all notes playing at a given sample time is summed and stored on a digital bulk memory device. After computation, sound is realized through converting the stored digital sound samples into analog voltages in real-time.

HALMOS István

1121 Budapest Hungary
Pinty u. 8.

Institute for Musicology
Hungarian Academy of Sciences
1014 Budapest
Országház u. 9

Group of Computational Ethnomusicology
mathematician : Dr. György Köszegei
engineer: Pál Sztanó

programmes/programs/programmi -----

"MOTIVE-PROGRAM"
An experiment in systematization of tunes

MEK
CAMA

SP-I, "Searching Program - I"
Input (keypunch:card/band; augmentation of the
decks)
Analysis (musical characteristics; types of
questions; parameter files of SP-I)
Output (line-print: Cosy form/SP-I form; punch
card)
Control and correction (correction of P1 & PH1
programs; control and correction of
data)

MEK
CAMA

activité/activity/attività -----

Development of SP-I :

Input : Analog music encoding with the help of engineer
Pál Sztanó; Visual encoding

MEA
MEV
CAMA

Analysis: augmentation of the number of musical characteris-
tics ready for investigation; organizer part of
the program

biographie/biography/biografia -----

1929 born in Budapest
1936-47 studies in violin
1948-50 studies in choir leading
1948-52 studies in ethnography (anthropology)
1956-58 active as museologist in the country
1959 Doctorate (University) and a postgraduate degree,
"Candidate of sciences" (Academy of Sciences)
1962-.. active as member of Folk Music Research Group
1974-.. Institute for Musicology of the Hungarian Academy
of Sciences
1967-68 field research in Venezuela among Piaroa Indians

HOFSTETTER Fred Thomas

735 Wollaston Avenue
Newark, Delaware 19711 U.S.A.

Music Department, University of Delaware
Newark, Delaware 19711 U.S.A.

Director of SONES, a University of Delaware Interdisciplinary Group for the New Aesthetic of Sounds

programmes/programs/programmi -----

MUSICODE in SNOBOL4, IBM-360 & 370
One-pass keypunch encoding system
Library of fifteen programs for stylistic research
(listing available)

MEK
CAMA

GUIDO in ALGOL, Burroughs 6700
Computer-based educational system for ear-training
(listing and documentation available)
PLATO implementation in progress

CAI

textes/writings/testi -----

COMPUTER APPLICATIONS TO MUSIC AT THE OHIO STATE UNIVERSITY. Stanford: The ERIC Clearinghouse, 1974

CAMA

MUSICODE AND SEVEN COMPUTER PROGRAMS FOR MUSICAL DESCRIPTION. Journal of the Graduate Music Students at the Ohio State University, No. 3 (Spring 1972), pp. 4-42

MEK
CAMA

A QUANTITATIVE METHOD FOR THE STUDY OF MUSICAL STYLE APPLIED TO NATIONAL DIFFERENCES AND SIMILARITIES IN THE USE OF MELODIC INTERVALS DURING THE MID-NINETEENTH TO EARLY TWENTIETH CENTURIES. Ph.D. Dissertation, The Ohio State University, 1974.

CAMA

cont:textes/writings/testi

NATIONAL DIFFERENCES AND SIMILARITIES IN THE USE OF MELODIC INTERVALS DURING THE MID-NINETEENTH TO EARLY TWENTIETH CENTURIES. To appear in Computers and the Humanities

CAMA

GUIDO : A COMPUTER-BASED EDUCATIONAL SYSTEM FOR THE LEARNING AND STUDY OF MUSICAL PERCEPTION.
in preparation, available August 1, 1975

CAI

activité/activity/attività -----

The principal activity at present is the development of GUIDO, which is described as follows : In July of 1974 the University of Delaware established a center for computational musicology with the dual purpose of improving instruction in music courses and learning more about the nature of musical skills. During its first year the center has developed an interactive computing system for recording student learning patterns in ear-training courses. An ear-training station consists of a graphics terminal which is used for displaying musical notation and recording student responses, and a synthesizer through which the computer generates aural stimuli. Interactive learning programs have been written in the following areas : melodic intervals, harmonic intervals, diatonic melodies, chromatic melodies, melodic memory, two-part dictation, rhythmic dictation, chord qualities, chord roots, diatonic harmonic progressions, harmonic progressions with modulations, non-harmonic tones, cadences, and error detection in harmonic, melodic, and rhythmic exercises. By means of these programs each student receives an individualized course of instruction in ear-training, and each student's learning patterns are recorded for further study. Controlled evaluations of the GUIDO system have shown that students who use GUIDO score a full letter grade higher than students who use traditional methods of ear-training.

CAI

The University of Delaware has formed a consortium to pursue this research on a national basis. Members of the consortium are as follows :

Michael Arenson, Iowa State University

Ned Diehl, Penn State U.

Burdette Green, Ohio State U.

Fred Hofstetter, U. of Delaware

Earl Hultberg, State U. College at Potsdam, N.Y.

Wolfgang Kuhn, Stanford U.

David Peters, U. of Illinois

Gary Wittlich, Indiana U.

The first meeting of the consortium will be held at the University of Delaware from August 18-20, 1975

6/75

Hofstetter Fred Thomas

biographie/biography/biografia -----

1949 born, Columbus, Ohio USA
1970 B.A., St.Joseph's College, Rensselaer, Indiana
1970-73 University Fellow, The Ohio State University
1971 M.A., Ohio State
1973-75 Assistant Professor of Music, Univ. of Delaware
1974 Ph.D., Ohio State

6/75

HOWE Hubert S., Jr.

884 West End Avenue, Apt. 103, New York, NY 10025, USA

Department of Music, Queens College of the City University of New York, Flushing, NY 11367, USA

Director, Queens College Electronic Music Studio

oeuvres/works/opere

Computer Variations, 1969, 9'30"

MPeC

Kaleidoscope, 1969, 7'40"

MPeC

Interchange, 1970-71, 12'20"

MPeC

Macro-Structure, 1971, 5'17"

MPeC

Freeze, 1972, 11'17"

MPeC

Three Studies in Timbre, 1972, 14'

MPeC

Canons, 1974, 35'

MPeC MCC

disques/records/dischi

Freeze is recorded by the American Society of University Composers and available in conjunction with its Proceedings, vols. 7/8, 1974.

programmes/programs/programmi

MUSIC7
FORTRAN IV and Meta-Symbol languages, Xerox Sigma 5/7/9 computer.
Computer music-synthesis program. MPeC

MUSIC4BF
(written with Godfrey Winham). FORTRAN IV language, presently running on IBM 360 and 370 computers, Xerox Sigma 5/7/9 computers, and CDC 6000-series computers.
A FORTRAN version of MUSIC4B. MPeC

MUSIC4B
(written with Godfrey Winham). FORTRAN II and BEFAP languages, IBM 7090/7094 computers.
Revision and expansion of Bell Telephone Laboratories' MUSIC IV program. MPeC

COMPOZ
FORTRAN IV, IBM 370/168 computer.
Program for music composition according to multi-dimensional arrays. MCC

textes/writings/testi

HOWE, Hubert S., Jr.
"COMPOSITIONAL TECHNIQUE IN COMPUTER SOUND SYNTHESIS."
Proceedings of the American Society of University Composers 7-8, 1972/1973. 26-30. MPeC

ELECTRONIC MUSIC SYNTHESIS.
W.W. Norton and Company, New York, 1975. 274p. MPeC
GMT

"A GENERAL VIEW OF COMPOSITIONAL PROCEDURE IN COMPUTER SOUND SYNTHESIS."
Proceedings of the American Society of University Composers 3, 1968. 98-108. MPeC

MUSIC7 REFERENCE MANUAL.
Queens College Press, New York, 1972. 112p. MPeC

cont.

"SOME COMBINATORIAL PROPERTIES OF PITCH-STRUCTURES."
Perspectives of New Music, 4, 1, Fall/Winter 1965.
45-61.

CAMA

"THE CHAOTIC STATE OF COMPUTER MUSIC."
Computers and the Humanities 4, 4, 1970. 277-283.

MPeC
GMT

activité/activity/attività —————

I am currently working on a new computer-composed piece which will exist in two versions: one will be a computer-synthesized electronic tape, and the other a score for live performance by instruments.

I am also writing a workbook for MUSIC4BF, to teach people how to use the program.

I would also like to mention the recent Third International Computer Arts Festival, held at the City University of New York in New York City, which exhibited computer art, films, and video work in addition to music.

biographie/biography/biografia —————

- | | |
|---------|--------------------------------------------------------------------------------------------------|
| 1942 | born in Portland, Oregon, USA |
| 1960-67 | studies in music at Princeton University, Princeton,
New Jersey |
| 1967- | faculty of Music Department, Queens College CUNY
(presently associate professor) |
| 1970- | President of League of Composers - International
Society for Contemporary Music, U.S. Section |
| 1974- | faculty of Juilliard School, New York City |

HULTBERG Mary Lou

72 Leroy Street, Potsdam, New York 13676 USA

Associate Professor of Music, Crane School of Music, State University College, Potsdam, New York 13676 USA

programmes/programs/programmi

CHORDAL (in collaboration with W.E.Hultberg)
(see below)

textes/writings/testi

HULTBERG, Warren E. & HULTBERG, Mary Lou
"PROJECT CLEF : CAI IN MUSIC THEORY."
in Proceedings of the Fourth Conference on Computers in Undergraduate Instruction (CCUC/4).
The Institute for Educational Computing, Claremont, California, 1973. 222-225.

CAME

-----,
COMPUTER-ASSISTED INSTRUCTIONAL PROGRAMS IN MUSIC THEORY. PARTS I AND II.
A report submitted to the Rand Corporation, Santa Monica California, as part of the study on the uses of computers in higher education commissioned by the Carnegie Commission on Higher Education. 1969-70.

CAME

activité/activity/attività

PROJECT CLEF (Computer Assisted Instruction in Music Theory). Since 1967, through the collaborative efforts of personnel of the Crane School of Music and the Department of Computer Science, CAI programs in music theory have been developed at the State University College at Potsdam, New York.

CAME

PROJECT CLEF is a continuation, further refinement and development of earlier efforts. Primarily concerned with the addition of sound capability to an already established CAI environment, recent directions have involved interfacing an electronic organ with the on-campus IBM System 360/30 configuration, development of appropriate software which provides complete harmonic, polyphonic, and rhythmic control of the organ output, and enables an author to create flexible instructional paradigms for a variety of purposes.

7/75

cont.

The language CHORDAL (Crane Heuristic ORgan DATA Language), developed as a major part of the project and written in PL/1, utilizes the dialogue capabilities of COURSEWRITER and many of the symbolic representations of DARMS, and is designed specifically for music instructional purposes. In working prototype form it has been successfully demonstrated and tested with representative groups of faculty and students.

Currently, major directions of PROJECT CLEF include determining the nature of necessary modifications in the interface unit and the language CHORDAL in order to implement CAI of this type on an autonomous minicomputer-based system.

All of the CAI programs developed at Potsdam stress work in the structural materials of music, utilize branching and strand techniques that provide maximum flexibility in usage for authors and students of varying musical backgrounds. Not linked to the content of any particular course or text, the programs stress the development of the competencies requisite for the understanding of the fundamentals and structural materials of music.

(In collaboration with Professor W.E.Hultberg and Professor R.C. Lightburn)

biographie/biography/biografia

- 1921 Born, Oklahoma.
- 1943 Bachelor of Music Education, University of Colorado, Boulder, Colorado.
- 1948 Master of Music, Westminster Choir College, Princeton, New Jersey.
- 1964 Doctor of Musical Arts, University of Southern California Los Angeles, California.
Public school and college teaching experience.
- 1963- Associate Professor of Music, Crane School of Music, State University College, Potsdam, New York.

72 Leroy Street, Potsdam, New York 13676 USA

Professor of Music, Crane School of Music, State University College, Potsdam, New York 13676 USA

programmes/programs/programmi

Tablature to Standard Notation (see below)

GMT CAMA

Thematic Indices of the works of several 16th Century Spanish composers (see below)

MEV MEK
CAMD

CHORDAL (in collaboration with M.L.Hultberg)
(refer to her listing)

CAME

textes/writings/testi

HULTBERG, Warren E.

GMT
CAMA

"TRANSCRIPTION OF TABLATURE TO STANDARD NOTATION."
in THE COMPUTER AND MUSIC, Harry B. Lincoln, ed.,
Cornell University Press, Ithaca, 1970. 288-292.

CAME

HULTBERG, Warren E. & HULTBERG, Mary Lou

"PROJECT CLEF : CAI IN MUSIC THEORY."

in Proceedings of the Fourth Conference on Computers
in Undergraduate Instruction (CCUC/4).
The Institute for Educational Computing, Claremont,
California, 1973. 222-225

CAME

-----,-----

COMPUTER-ASSISTED INSTRUCTIONAL PROGRAMS IN MUSIC
THEORY. PARTS I AND II.

A report submitted to the Rand Corporation, Santa
Monica, California, as part of the study on the uses of
computers in higher education commissioned by the
Carnegie Commission on Higher Education. 1969-70.

activité/activity/attività

1. Project CLEF : CAI in Music Theory. In collaboration with M.L.Hultberg (refer to her listing).

CAME

7/75

cont.

2. Development of thematic indices (in DARMS/Ford Columbia Music Representation) of the complete works of 16th century Spanish composers : Antonio de Cabezón, Venegas de Henestrosa, Alonso Mudarra, Cristóbal de Morales, Enriquez de Valderrabano, Tomás Luis de Victoria.
In Process : Miguel de Fuenllana ; Diego Pisador.
- MEV
MRK
CAMD
3. Tablature to Standard Notation.
This system is designed to provide an efficient method for the production of a correct one-to-one translation of tablature (keyboard-e.g., Cabezón ; vihuela or lute-Spanish/Italian ; lute or gamba, etc.-French/English ; German in process) via an intermediate code based on the tablature, to DARMS, and utilizing an additional process still under development, to standard notation. The translation program (tablature to intermediate code to DARMS) is in PL/1 ; the additional program (DARMS to standard notation) currently in FORTRAN IV.
Procedures : 1) INPUT . Manual encoding of the intermediate code on 80 column keypunching forms. The encoder, making relatively musicological decisions, follows separately each voice (keyboard) or string (lute, vihuela, etc.) from the beginning to end of each piece. The format is a five character field that indicates note, values, and other information.
2) OUTPUT (DARMS). The PL/1 concatenates the data, aligns vertical simultaneities, edits out extra data (e.g., measure bars used separately in each part), detects any encoding errors. In the DARMS format, the music may be analyzed using additional programs in any way desired and appropriate for computerized analysis.
3) DARMS version used for score printout (under development).
- GMT
CAMA
4. In process : an edition of the Libro de musica de Vihuela (1552) by Diego Pisador. A unique feature of the preparation of this edition is the use of the computer as part of the transcriptional process.
- CAMA
CAMD

biographie/biography/biografía

- 1921 Born at Great Falls, Montana.
1957 Bachelor of Arts, University of Nevada, Reno, Nevada.
1959 Master of Arts, University of Southern California, Los Angeles
1964 Doctor of Philosophy, ibid.
1948-58 Professional musician. Owner-manager of music store, Reno.
1959-63 Lecturer, instructor, University of Southern California.
1963- Present position. Professor of Music, Crane School of Music, State University College, Potsdam, New York.

7/75

JOHN Robert W.

199 Spruce Valley Road
Athens, Georgia 30601

Music Department, University of Georgia
Athens, Georgia 30602

Chairman, Southern Division Research Committee, Music
Educators National Conference

activité/activity/attività ----- CAND

We are presently involved in major pilot projects of abstracting, storing and retrieving the literature of music -- that is journal articles, books, monographs, dissertations and the like. Our present (first) phase now in progress is to abstract and assign key words or word phrases to all of the (signed) articles of 25 music journals. Twenty of the 25 will be the complete output of the journal, while five will be limited only to the most recent twenty five years.

The second phase -- to begin in early 1977 will be to do a similar abstracting of (music) books.

Concurrent with these projects is the development of a thesaurus for the orderly storage and retrieval of this information. The advantage of this project is that frequent indicies can be published which are cumulative -- not supplemental. Maintenance programs have been developed which allow updated materials to be entered and the totally new and complete index to be published at (if desired) daily intervals, or at any other practical interval of time.

5/75

KOENIG Gottfried Michael

Everard Meysterlaan 89, Utrecht, Netherlands

Institute of Sonology, Utrecht State University

oeuvres/works/opere -----

Project 1 - Version 1

MCC

Project 1 - Version 3

MCC

Uebung fuer Klavier

MCC

programmes/programs/programmi -----

PROJECT 1 (computer program for musical composition), FORTRAN

MCC

PROJECT 2 (computer program for musical composition), ALGOL

MCC

SSP (sound synthesis program),
MACRO-15, PDP-15 computer

MPeC

textes/writings/testi -----

KOENIG, Gottfried Michael, NOTIZEN ZUM COMPUTER
IN DER MUSIK, The World of Music, IX, 3,
Berlin 1967. 3-13.

MCC

KOENIG, Gottfried Michael,
COMPUTER-VERWENDUNG IN KOMPOSITIONSPROZESSEN
in: Dibelius, Musik auf der Flucht vor sich selbst
München 1969

MCC

Koenig Gottfried Michael

cont:textes/writings/testi

KOENIG, Gottfried Michael. PROJECT 1
Electronic Music Reports 2, 1970. 32-44.

MCC

KOENIG, Gottfried Michael, PROJECT 2, A PROGRAM
FOR MUSICAL COMPOSITION
Electronic Music Reports 3, 1970. 4-161.

MCC

KOENIG, Gottfried Michael, THE USE OF COMPUTER
PROGRAMS IN CREATING MUSIC
in: Music and Technology, UNESCO Report,
La Revue Musicale, Paris 1970. 93-115.

MCC

TEMPELAARS, Stan & KOENIG, Gottfried Michael,
THE COMPUTER AT THE INSTITUTE OF SONOLOGY
Interface I, 2, Amsterdam 1972. 167-174.

GMT

activité/activity/attività

Mainly occupied with an expanded version of PROJECT 2 and
the final implementation of SSP. Experiments with
students in musical language element recognition based on
PROJECT 1-generated structures.

MCC
MPeC

biographie/biography/biografia

1926 born in Magdeburg, Germany
1946-47 studies at Brunswick Conservatory (church music).
1947-50 studies at Detmold Academy (composition, piano,
acoustics)
1953-54 studies at Cologn Hochschule
1963-64 studies in computer programming at Bonn University
1954-64 Electronic Music Studio, Cologn Radio Station
1962-64 Lecturer for electronic music, Cologn Hochschule
1963-64 Lecturer for composition and analysis, Cologn
Hochschule
1964-- Institute for Sonology, Utrecht University,
Artistic Director

12/75

KOWALSKI Michael J.

103 Hartle Avenue
Urbana, Illinois 61801 U.S.A.

Composition/Theory Division
School of Music, University of Illinois
Urbana, Illinois 61801

oeuvres/works/opere -----

<u>Program Etude//CDW/JNS</u> 2-track tape, 1'55" (CDW sound synthesis program by M. Kowalski, MUSIC IV conversion routines; execution: IBM 360/ 44, Oberlin College)	MPeC
<u>Plateaus</u> string sextet, ca. 2' (CRANK program by M. Kowalski, Markovian calculation of pitch, rhythmic, dynamic details; execution: IBM 360/44)	MCC
<u>Variations</u> string sextet (2.2.1.1.), ca 16' (CRANK I program by M. Kowalski; execution: IBM 360/44)	MCC
<u>The Enfance of the Queen of Sheba</u> fl, cl, bn, hn, tpt, b.tbn, cel, mar, pno, vn, vla, vc, ca. 8'30" (CRANK II program; execution: IBM 360/65)	MCC
<u>Tracks</u> xylophone, marimba, vibraphone, piano, anvil, ca. 8' (CRANK III program; execution : IBM 360/65)	MCC
<u>Refuse</u> fl, hpsch, cl, tpt, vla, bn, mar, vc, ob, pno, perc.quartet, ca. 10' (TEXTURE program and CRANK IV program by M. Kowalski; execution: IBM 360/75, University of Illinois, Urbana)	MCC
<u>Analysis of Penderecki's De natura sonoris 2</u>	CAMA
<u>Analysis of Xenakis' Akrata</u> : information theory viewpoint; prog's PHRASE, EARS by M. Kowalski	CAMA

9/75

programmes/programs/programmi -----

CDW in FORTRAN IV, IBM 360/44

MPeC

Digital sound synthesis derived from MINISOUND, tutorial program implemented at Oberlin Conserv.; timbre synthesis by means of complex transient functions (up to 20 simultaneous, independent attack envelopes)

MUSBIB in SNOBOL III, IBM 360/44

CAND

Digital storage and cross referencing system for annotated music bibliographies (listing available)

CRANK (five versions) in FORTRAN IV, IBM 360/75

MCC

Sixth-order Markovian process for the derivation of pitch, rhythmic, dynamic, and articulative details within a generalized structure specified by the composer; produces contrapuntal textures of up to 8 voices. A special function is implemented to regulate the level of noise (information theory) in the output. (listing available)

TEXTURE in FORTRAN IV, IBM 360/75

MCC

Semi-Markovian process for the derivation of densities within a generalized contrapuntal structure specified by the composer. Special functions insure that

1. no one voice or section will predominate, and
2. passages marked by continuity of line will alternate with passages characterized by disjunction. (listing available)

PHRASE, EARS programs in FORTRAN IV, IBM 360/75

CANA

Formal analysis on the basis of fluctuating rates of change in frequency, amplitude, timbre.

(listing available)

activité/activity/attività -----

Refuse for chamber ensemble marks the end of a three-year project in Markovian composition; six FORTRAN programs were implemented during the course of the project.

MCC

Currently studying systems programming and digital circuit design in the dept. of computer science, University of Illinois. I am hopeful that these studies will enable me to undertake the design of a digitally-controlled real-time electronic music device -- without frequent recourse to electrical engineers. Preliminary designs for the device have already been made. The basic hardware configuration for the control circuitry will be a set of microprocessors linked in parallel, affording not less than 4K words of memory. The basic hardware configuration for the audio signal will be a set of digitally-controlled pulse generators and attenuators -- patching to be controlled automatically. The system will be implemented with these requirements in mind:

MCC

1. that it be easily reprogrammable
2. that it be a performing instrument (requiring significant input at execution time)
3. that it produce a gamut of sounds not available from voltage-controlled devices
4. that the entire system be transportable.

I also intend to begin a new series of computer-aided compositions (pencil-and-paper variety!) based upon concepts borrowed from information theory, game theory, and various artificial intelligence schemes.

MCC

During the past year I have developed an analytical method (partially computer-implemented) based on the study of fluctuating rates of change in frequency, amplitude, and timbre. This analytical technique has yielded non-trivial results when applied to musics as diverse in conception as Penderecki's De natura sonoris 2 and Xenakis' Akrata. I hope to continue these analytical experiments on an everwidening range of literature!!

CAMA

Kowalski Michael J.

biographie/biography/biografia -----

1950	born in Buffalo, New York.
1968-72	piano, musicology, theory studies at Oberlin Conservatory
1970-72	composition and research in the digital and analog electronic music studios at Oberlin
1972-74	composition studies at the University of Iowa with Richard Hervig and Peter Lewis; work in the analog studios at Iowa.
1974-..	Teaching assistant, music theory, Univ. of Iowa. composition studies at the University of Illinois with Herbert Brün and Salvatore Martirano.
1974-75	University Fellow in music, Univ. of Illinois
1975-..	Teaching assistant , music theory, U. of Illinois

LASKE Otto E.

Maliebaan 39A, Utrecht, Pays-Bas

c/o Department of Music, University of Pittsburgh,
Pittsburgh, PA. 15260, USA

I was, during 1970-1975, as a member of staff of the Institute
of Sonology, Utrecht, The Netherlands

oeuvres/works/opere —————

<u>STRUCTURE IV</u> , 1973, 17'35" quadraphonic composition using real-time sound synthesis material.	MCC
<u>STRUCTURE V</u> , 1974, 17'40" quadraphonic composition using real-time sound synthesis material.	MCC
<u>STRUCTURE VIII</u> , 1975, 19'30" real-time sound synthesis material, two versions, no. 1 & 2	MCC
<u>STRUCTURE IX</u> , 1975, 16'45" quadraphonic composition, using real-time sound synthesis.	MCC
<u>INTONATION I</u> , for 2x6 voices a cappella, 1975 an interpretation of output of G.W.Koenigs Project One.	MCC

programmes/programs/programmi —————

remark: all programs were developed together
with Mr. Barry Truax, now c/o Department of
Communication Studies, Simon Fraser University

OBSERV-1, OBSERV-2, CBSVAR
FORTRAN/MACROC-15, FDP-15;
The protocol analysis of musical composition
and perception tasks. Listing available.

6/75

Laske Otto E.

cont.

PHRAN
analysis program

CAMA

CBSYN
program for the simulation of elementary
music-syntactic composition

CAMA

OBSPER
machine perception system (planned)

CAMA

(For detailed information on these programs,
consult: "Introduction to the OBSERVER programs,
a series of computer programs for research in
musical activity", unpublished manuscript,
Institute of Sonology, University of Utrecht.)

textes/writings/testi

LASKE, Otto
INFORMATION-PROCESSING PSYCHOLOGY TODAY: ITS
PROBLEMS AND METHODS.

GMT

Onderzoeks memorandum AMS-3, Subfaculteit Psychologie,
Afdeling Methodologie en Statistiek, Rijksuniversiteit
Utrecht, May 1974. Republished as: THE INFORMATION-
PROCESSING APPROACH TO MUSICAL COGNITION, Interface
3, 2, Dec. 1974. 109-136.

"INTRODUCTION TO A GENERATIVE THEORY OF MUSIC."
Sonological Reports 1, Institute of Sonology,
Utrecht State University, Spring 1973. 103p.

GMT

"MUSICAL ACOUSTICS (SONOLOGY). A QUESTIONABLE
SCIENCE RECONSIDERED." Numus West 6, 1974. 35-40.

GMT

"MUSICAL SEMANTICS, A PROCEDURAL POINT OF VIEW --
PART I."
Actes du 1er Congrès International de Sémiotique
Musicale, 1973, Centro di Iniziativa Culturale,
Pesaro, 1974.

GMT

cont.

"ON PROBLEMS OF A PERFORMANCE MODEL FOR MUSIC."
Sonological Reports 1, Institute of Sonology,
Utrecht State University, Sprong 1973. 135p.

GMT

TOWARD A CENTER FOR STUDIES IN MUSICAL
INTELLIGENCE. Spring 1973. 9p. N.d., dactylo.

GMT

"TOWARD A MUSICAL INTELLIGENCE SYSTEM: OBSERVER."
Numus West 4, Fall 1974. 11-16.

GMT

TOWARD A THEORY OF MUSICAL COGNITION.
Onderzoeksmonografie AMS-10, Subfaculteit Psychologie,
Afdeling Methodologie en Statistiek, Rijksuniversiteit
Utrecht, May 1975. 87p. Reprinted in Interface 4, 2,
1975.

GMT

activité/activity/attività -----

- a) work toward an automatic analysis, and the simulation of contents, of protocols from OBSERV-1 and OBSVAR; these protocols were taken with adults and with children, to serve research in musical activity and acquisition.
- b) development of CBSYN, solving phase, - a system for the simulation of syntactic composition.
- c) basic design of OBSPER, a machine perception system for the semantic recognition of short musical phrases from real-time sonic input.
- d) theoretical foundations of psychomusicology, a discipline researching the perceptual and intellectual processes underlying the creation and understanding of musical structures.

biographie/biography/biografia —

- 1936 Born in Olesnica (Oels), Silesia
1955-66 studies in philosophy, musical composition,
musicology, English/american Literature,
Frankfurt University, West Germany
1966-68 studies in musical composition and conducting,
New England Conservatory, Boston, Mass., USA
1968-70 teaching positions in Canada (Brock, McGill Universities)
1970-75 member of staff, inaugurator of a research group for
studies in musical activity, Institute of Sonology,
University of Utrecht
1975-76 Andrew Mellon Postdoctoral Fellow, University of
Pittsburgh, PA, USA

LINCOLN Harry B.

2700 Hall Street, Endwell, New York 13760 USA

Department of Music, State University of New York,
Binghamton, New York 13901 USA

textes/writings/testi —————

LINCOLN, Harry B., ed.
THE COMPUTER AND MUSIC.
Cornell University Press, Ithaca, 1970. 354p.

GMT

"THE COMPUTER AND MUSIC RESEARCH: PROSPECTS AND
PROBLEMS."
Council for Research in Music Education Bulletin
18, Fall 1969. 1-9.

GMT

"A COMPUTER APPLICATION IN MUSICOLOGY:
THE THEMATIC INDEX."
Information Processing 68: Proceedings of IFIP
Congress 1968, A.J.H. Morell, ed., North Holland,
Amsterdam, 1969. 957-961.

MEK
CAMD
MPrC

"THE CURRENT STATE OF MUSIC RESEARCH AND THE COMPUTER."
Computers and the Humanities 5, 1, Sept. 1970. 29-38.

GMT

"MUSICOLOGY AND THE COMPUTER: THE THEMATIC INDEX."
in COMPUTERS IN HUMANISTIC RESEARCH, Edmund A.
Bowles, ed., Prentice-Hall, Englewood Cliffs, 1967.
184-193.

MEK
CAMD

"SOME CRITERIA AND TECHNIQUES FOR DEVELOPING
COMPUTERIZED THEMATIC INDICES."
in ELEKTRONISCHE DATENVERARBEITUNG IN DER
MUSIKWISSENSCHAFT, Harald Heckmann, ed.,
Gustav Bosse, Regensburg, 1967. 57-62.

MEK
CAMD

cont.

THE THEMATIC INDEX: A COMPUTER APPLICATION
TO MUSICOLOGY."
Computers and the Humanities 2, 5, May 1968. 215-220.

MEK
CAMD

"USE OF THE COMPUTER IN MUSIC RESEARCH: A SHORT REPORT
ON ACCOMPLISHMENTS, LIMITATIONS AND FUTURE NEEDS."
Computers and the Humanities 8, 5-6, Sept/Nov. 1974.
285-289.

MEK
CAMD

"USFS OF THE COMPUTER IN MUSIC COMPOSITION AND
RESEARCH."
Advances in Computers 12, 1972. 73-114.

GMT

activité/activity/attività -----

Thematic indexing by computer and development of music typography for the high-speed line printer. Our data base includes about 53,000 incipits of sixteenth-century Italian polyphony. In preparation is a thematic index of the frottola repertory with incipits printed by the computer.

MEK
MPrC
CAMA
CAMD

biographie/biography/biografia -----

Born Fergus Falls, Minnesota, USA
Educated at Macalester College, University of Rome (Italy) and Northwestern University.
Degrees: BA, MM, Ph.D.
Since 1951 on the faculty of the Department of Music at State University of New York at Binghamton, New York.
Presently chairman of the department.

7 Miles Avenue, Middletown, Connecticut 06457 USA

Wesleyan University

Director, Wesleyan University Computer Arts Studio

oeuvres/works/opere _____

RMSIM 1, The Bird of Bremen Flies Through the Houses
of the Burghers, 1972

MCC

Gentle Fire, 1971

MPrC

programmes/programs/programmi _____

RMSIM 1

Simulation of change in room size in terms of resonance, reverberation, volume, etc.

textes/writings/testi _____

Book review : Computers and the Arts, Music Educators Journal.

activité/activity/attività _____

Director of the Wesleyan University Computer Arts Studio. Projects in environmental simulation.

biographie/biography/biografia _____

- 1931 born in Nashua, New Hampshire
studied music with H.Boatwright, D.Krahenbuhl and Q.Porter at Yale ; A.Berger, I.Fine and H.Shapero at Brandeis ; L.Foss at Tanglewood ; B.Porena in Rome ; D.Tudor in Darmstadt.
1962 appointed to the faculty of Brandeis University as Director of the Brandeis Choral Union

6/75

Lucier Alvin

cont.

has performed extensively in the United States and Europe with Pauline Oliveros, Nam Jun Paik, David Tudor, Frederic Rzewski.

has collaborated with filmmaker Takahiko Iimura, sculptors Jean Dupuy and Mary Lucier.

along with composer/performers Robert Ashley, David Behrman and Gordon Mumma, founded the Sonic Arts Union, an ensemble devoted to the making and performance of live electronic theatre music.

since 1970 has been at Wesleyan University as Director of the Electronic and Computer Music Facility.

6/75

School of Music, University of Illinois at Urbana-Champaign,
Urbana, Illinois 61801 USA

oeuvres/works/opere

- Forandre Seven Variations for Digital Computer, 1969-70
American Composers Alliance, New York
(MUSIC4B and MUSIC360 programs) MPeC
- Quietus Opera in One Act for Fourteen Instruments, Four
Voices and Computer-synthesized Tape, 1968-70
(MUSIC360 program) MPeC
- 91 Plus 5 for Brass Quintet and Computer, 1970-71
American Composers Alliance, New York
(MUSIC360 program) MPeC
- Valedictory for Soprano and Computer, 1973
American Composers Alliance, New York
(MUSIC360 program) MPeC
- Zonnorities for Oboe, Clarinet and Computer, 1974
In preparation for publication by American Composers
Alliance, New York
(MUSIC360 program) MPeC
- Two Stevens Songs for Soprano and Computer, 1975
In preparation for publication by American Composers
Alliance, New York
(MUSIC360 program) MPeC

disques/records/dischi

- Forandre Seven Variations for Digital Computer
special recording issued as supplement to Vols. 7/8 of
the Proceedings of the American Society of University
Composers, 1973 MPeC
- 91 Plus 5 for Brass Quintet and Computer
Composers Recordings, Inc. SD-310 MPeC

6/75

textes/writings/testi _____

MELBY John

"SOME RECENT DEVELOPMENTS IN COMPUTER-SYNTHESIZED MUSIC."
Proceedings of the American Society of University Composers 5, 1972. 111-121

activité/activity/attività _____

I am primarily active as a composer and teacher. I have taught computer music both at West Chester State College and at the University of Illinois, and have given lectures on the uses of the computer in music at numerous institutions.

My primary interests in computer music are the use of the computer as a sound synthesis device and as an aid to composition. My work in the latter area is principally concerned with using the computer to perform systematic transformations on musical materials and not with generating compositions with the use of such devices as random number generators.

MPeC MCC

One of my main interests is the combination in a concert situation of live instrumentalists or singers with computer-synthesized tapes. I have written several works in this medium.

MPeC

biographie/biography/biografia _____

- 1941 Born Whitehall, Wisconsin, USA
- 1960-64 Studied music at Curtis Institute of Music, Philadelphia (B.Mus., 1966)
- 1966-67 Studied Composition with George Crumb, University of Pennsylvania (M.A., 1967)
- 1968-72 Studied Composition at Princeton University with Milton Babbitt, J.K.Randall, and Peter Westergaard (M.F.A., 1971, Ph.D., 1972). Began work with computer music, 1968.
- 1971-73 Assoc. Prof. of Music, West Chester State College, West Chester, Pa.
- 1973-present Asst. Prof. of Music, University of Illinois.

6/75

14 rue Etex, 75018 PARIS, FRANCE

C.N.R.S., 27, rue Paul Bert, 94200 IVRY, FRANCE

Equipe de Recherche sur l'Analyse et la Transcription des Tablatures par Ordinateur (E.R.A.T.T.O.)

activité/activity/attività _____

1. A.C.C. financée par la D.G.R.S.T. dans le cadre de E.R.A.T.T.O. C.N.R.S. à Ivry.
Titre : "Etude et réalisation d'un système général de constitution et d'exploitation de données pour l'identification et l'analyse des textes musicaux."
2. Doctorat de 3^ecycle en préparation.
Titre (provisoire) : "Les styles de mélodies privilégiées dans la musique du 15^e siècle d'après l'étude informatique des manuscrits."
Ce travail s'effectue à partir d'un fichier d'incipit musicaux établi par Nanie Bridgman, Conservateur Honoraire au Département de la Musique à la Bibliothèque Nationale. Etude d'environ 20000 fiches.

Asst. Prof., Conservatory of Music, Oberlin College,
Oberlin, Ohio 44074 USA

oeuvres/works/opere

Tower Music, tape, 1969-74

(Digital sound synthesis, MUSIC4BF program on IBM 360 computer at Bowling Green State University)

MPeC

Function Complex No.6, tape and/or instruments, 1973

(Digital sound synthesis, modified MUSIC4BF program, computer-aided composition, COMPOSE program by G.Nelson, PDP-15 computer and analog sound generating system of the Electronic Music Studios in Stockholm)

MPeC MCC
MPrC

Particulation, tape, 1974

(Digital sound synthesis and computer-aided composition, program by G.Nelson, IBM 360/44 computer at Oberlin College)

MPeC MCC

Three Studies in Frequency Modulation, tape, 1975

(Digital sound synthesis, MUSIC4BF program, computer-aided composition, COMPOSE program by G.Nelson, IBM 360/44 computer at Oberlin College)

MPeC MCC

biographie/biography/biografia

- 1940 born in Albion, Michigan
studies at the University of Michigan, Institute of Sonology (Utrecht), Washington University (Ph.D. in composition : 1974)
- 1973 guest researcher in the Electronic Music Studios of the Swedish radio
appointed to the directorship of the Computer Music Center at Bowling Green State University
- 1974 joins the faculty of the Technology in Music program at the Oberlin Conservatory. At Oberlin, teaches computer music and is responsible for development of computer music systems.

6/75

48, rue Greneta, 75002 PARIS, FRANCE

CEntre de Mathématique et d'Automatique Musicales (CEMAMu)
et Groupe Art et Informatique de Vincennes (GAIv)

œuvres/works/opere

Scrap Time, bande, 1974
(Programme SIMSIM 3 de Jacques Arveiller)

MCC

Triphase (avec André Riotte)
(Musique formalisée)

textes/writings/testi

NYST, Frédéric.
"INFORMATIQUE ET MUSIQUE"
Cahiers du Centre de Recherches Musicales de Wallonie

GMT

activité/activity/attività

1/ Projet de structures sonores pour un palais d'exposition
(musique pour 300 haut-parleurs et 20 magnétophones)

MEA

2/ (K.R.A.M.)

MCC

3/ "NON IRON", projet de musique sans repentir.

ZEN

biographie/biography/biografia

NYST Frédéric (1939-19 ?)
20 ? }

6/76

rue du Bénel 63, 1150 Bruxelles, Belgique

Commission des Communautés Européennes, Bruxelles

Centre de Mathématique et d'Automatique Musicales (CEMAMu), Paris

œuvres/works/opere

Jubilation Heuristique, pour contralto, clarinette, trompette et marimba, 1968
 (Composition aidée par ordinateur, programmes GENECE de A. Debroux et A. Riotte, SECE de A. Riotte, ASCE de Van Den Muyzenberg)

MCC

Orbitales 1 et 2, pour piano, 1970
 (idem)

MCC

Perspectives 360, pour quatuor à cordes, 1971
 (idem)

MCC

Suite explicite, pour clarinette seule, 1973
 (idem)

MCC

Transe calme, pour piano, 1974
 (Exploitation d'un modèle informatique de composition musicale, MODIC, de A. Riotte)

MCC

programmes/programs/programmi

GENECE (A. Debroux & A. Riotte)
 FORTRAN 4, IBM 360/65
 génération de cycles équilibrés

MCC

SECE (A. Riotte)
 sélection de cycles équilibrés

MCC

ASCE (Van Den Muyzenberg)
 association de cycles équilibrés

MCC

textes/writings/testi

RIOTTE, André.

"GENERATION DES SERIES EQUILIBREES"

Rapport interne EURATOM n°353, Jan.1963. (non disponible)

MCC

"IL NANOSECONDO BIEN TEMPERATO"

Rivista IBM 5, 2, Milane, 1969.

MCC

"INFORMATIQUE MUSICALE : JONCTION NOUVELLE ENTRE ART ET SCIENCE"

Eurospectra 13, 1, Mars 1974. 2-15

GMT

"UN MODELE INFORMATIQUE D'UNE PIECE DE STRAVINSKY"
(à paraître)

CAMA

activité/activity/attività

Développement d'un modèle informatique de composition musicale.
Analyse musicale aidée par ordinateur.

MCC
CAMA

biographie/biography/biografia

1928 né à Paris

1946-50 études de composition et d'analyse avec Honegger, Jolivet,
Messiaen, Barraqué

1965-70 Assistant du Chef du Centre de Calcul au Centre EURATOM
d'Ispra (Italie)

depuis 1970 participe aux travaux de l'EMAMu

depuis 1972 conférencier au CEMAMu

depuis 1971 politique de l'informatique, Commission des Communau-
tés Européennes, Bruxelles.

39 Allée Albeniz, 13008 Marseille, France

U.E.R. de Luminy, 13288 Marseille Cedex 2, France

Informatique et Acoustique Musicale, Luminy, Marseille

œuvres/works/opere —————

Computer Suite for Little Boy, 1968, 12'50"
(Digital sound synthesis, 2-tracks tape)

MPeC

Mutations I, 1969, 10'30"
(Digital sound synthesis, 2-tracks tape)

MPeC

Mutations II for flute, clarinet, piano,
percussion and 2-tracks tape, 1973, 17'
(Digital sound synthesis)

MPeC

Sol#, 1974, 4'
(Digital sound synthesis, 2-tracks tape)

MPeC

disques/records/dischi —————

Computer Suite for Little Boy
in "Voice of the Computer", Decca DL 71 0180

MPeC

Mutations I
in "Electronic Music N° 5", Turnabout Vox TV S 34427

MPeC

programmes/programs/programmi —————

MUSIC V
Adaptation for computer Telemecanique T 1600
with 32k words of 16 bits and disk, with
some additions

MPeC

6/75

textes/writings/testi—

RISSET, Jean-Claude

"PARADOXES DE HAUTEUR: LE CONCEPT DE HAUTEUR
N'EST PAS LE MEME POUR TOUT LE MONDE."

Proceedings of the 7th International Congress of
Acoustics, Budapest, 1971.

PMeC

"QUELQUES REMARQUES SUR LES MUSIQUES POUR
ORDINATEUR ET L'INTERPRETATION."
Musique en Jeu 3, Mai 1971. 5-11.

SUR L'ANALYSE, LA SYNTHESE ET LA PERCEPTION DES
SONS ETUDES A L'AIDE DE CALCULATEURS ELECTRONIQUES.
Thèse de Doctorat, Orsay, 1967.

"SYNTHESE DES SONS A L'AIDE D'ORDINATEURS."
La Revue Musicale 268-269, 1971. 113-123.

-----, CHARBONNEAU, Gerard, KARATCHENTZEFF, P.
"UN SYSTEME DE SYNTHESE DIRECTE DES SONS A L'AIDE
D'ORDINATEURS."
Revue d'Acoustique 21, 1972. 289-296.

-----, MATHEWS, Max V.
"ANALYSIS OF MUSICAL-INSTRUMENT TONES."
Physics Today 22, 2, Feb. 1969. 23-30.

MATHEWS, Max V., MOORE, F.R., RISSET, Jean-Claude
"COMPUTERS AND FUTURE MUSIC."
Science 183, 4122, 25 Jan. 1974. 263-268.

PIERCE, John R., MATHEWS, Max V., RISSET, Jean-Claude
"WEITERE EXPERIMENTE IM MUSIKALISCHEN GEBRAUCH DES
ELEKTRONENRECHNERS"/"FURTHER EXPERIMENTS ON THE USE
OF THE COMPUTERS IN CONNECTION WITH MUSIC."
Gravesaner Blätter/Gravesano Review 28-28, Nov. 1965.
85-91/92-97.

6/75

activité/activity/attività—

I work with the computer sound synthesis system in Luminy, which is operational since April 1975. With the group there, I want to do some studies in psychoacoustics both to make music with the computer and to educate people (including scientists) about musical sounds. We hope to do work on musical composition together with the "Groupe d'Intelligence Artificielle".

MPeC

At IRCAM, we have an ambitious program of 1) psychoacoustic research, 2) educating musicians to use the computer. One of the utopias that has led me in this field is the urge for sound materials that can be controlled in a subtle, elaborate, different way, to the extent that they call for new musical architectures.

biographie/biography/biografia—

- | | |
|---------|------------------------------------------------------------------------------------------------------|
| 1938 | born in Le Puy, France |
| 1955-63 | studies in math & physics (Ecole Normale Supérieure), piano & composition (R. Trimaille, A. Jolivet) |
| 1964-65 | works with Max Mathews at Bell Laboratories on |
| 1967-69 | computer sound synthesis. Thesis. |
| 1969-71 | starts computer sound synthesis system in Orsay |
| 1972 | Maitre de Conférences, Luminy |
| 1974 | head, computer department, IRCAM |

6/75

ROADS Curtis

Box 853, Del Mar, California 92014 USA

University of California, San Diego-La Jolla

oeuvres/works/opere

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| <u>3-S</u> stereo tape, 1972
for electronically-processed string textures
realized at Cal. Inst. of the Arts | MCC |
| (untitled) live electro-acoustic performance, 1973
the computer output three scores for three
synthesizer performers which directed the
processing of source tapes | MCC |
| <u>Mass Colligation 1</u> stereo tape, 1973
computer-generated score which was realized in
the Analog Studios, Cal. Inst. of the Arts | MCC |
| <u>Mass Colligation 2</u> stereo tape, 1974
computer-generated score which was realized from
source tapes gathered at: WHA Studio one, Madison,
Wisconsin, Le Centre Américain Studio, Paris,
and the Analog Studios at Cal Arts, where it was
realized | MCC |
| (prototype) stereo tape, 1975
compositional model for a B6700 ALGOL program,
with synthesis by the computer. The mode of
synthesis was an ALGOL program for automated
granular synthesis which writes (at an average
density) 3000 NOT records to the B6700 MUSIC V,
per minute of sound | MPeC |

6/75

programmes/programs/programmi

MC2 (Jan. 1974)

NOVA BASIC (interactive), Data General NOVA computer - teletype output, Cal. Inst. of the Arts, Valencia, California.

MC2 is an autonomous compositional program based on various stochastic functions. The program is historical in that data output is analysed, which alters parameter values for the stochastic functions, which are updated at each internal state of the program. The functions interact with one another in one-to-one and many-to-one relations. The output on the teletype is both numeric and graphic. This output is organized into a score and approximated in an electro-acoustic studio.

MCC

PLFKLANG (Jan. 1975)

Burroughs B6700 Ext. ALGOL, Burroughs B6700 computer (cards, disk, tape, line printer files used), University of California, San Diego at La Jolla.

PLFKLANG is a program bound to the FORTRAN MUSIC V system at UCSD. PLFKLANG generates NOT records for sound spectra at a mean density of 3000 NOT records for each minute of sound. Each NOT is an extremely short event of an individual frequency, an individual amplitude, but having a fixed duration (20 ms), and a fixed envelope (an interpolation between a Gaussian curve and a long pulse). The waveshape of each "grain" is variable in all degrees between a sine and a band-limited pulse wave. A composer specifies points, lines, clusters and masses of grains, each grain's values computed separately with an efficient stochastic procedure, then the grains are processed by MUSIC V passes 2 and 3, where they are computed to an accuracy of 16 bits, rescaled to 12 bits, and output to the D/A at the Center for Music Experiment. Timbral spectra can result from 3 phases of the program: 1, varying the bandwidth of a section or mass of grains to a random cloud of grains, 2, by organizing sections of grains into simultaneous, yet stochastically varying clusters of time-dependent bandwidths, or 3, by varying the waveform of the grains by some time function.

MCC

6/75

cont.

FLX (spring 1975)

Burroughs ALGOL B6700 computer, UCSD, La Jolla
FLX is a compositional program based on many of the concepts of systems theory. Each variable represents a compositional organizing principle. A foreground system computes values for these variables. The variables are represented in the program as stochastic automata. Analysis routines monitor the output data of the automata and control a background process of interaction among the automata. The program thus composes a continuously varying compositional logic, through its control of the networks of relations among the compositional organizing principles. Finally, a translation routine gathers all the data concerning the values for the organizing principles, and translates these fuzzy properties into 2 types of output data: input to computer synthesis program PFKLANG, and score data to be used in the studio remix process (spatial characteristics).

activité/activity/attività —

As a composer, my primary interest is structural music. My orientation signifies a reorientation from: Composition-as-object to: Composition-as-praxis in a two-fold sense. First, compositions come to embody praxis in-time; i.e., a composition represents a set of dynamic relations. Second, compositions are embodied praxis; i.e., a composition comes to represent the processes mediating its production. As a listener, I more and more hear algorithms.

biographie/biography/biografia —

- | | |
|---------|-------------------------------------------------------------------------------|
| 1951 | Born Cleveland, Ohio USA |
| 1971 | first work in electroacoustic music, U. of Illinois Experimental Music Studio |
| 1971 | Studio Synthesist (ARP system) Full Compass Sound, Madison, Wisconsin |
| 1972 | attended Formalized Music Seminar w/Xenakis, Bloomington, Indiana |
| 1972-74 | study composition at Cal. Inst. of the Arts, Valencia, CA |
| 1974-75 | study computer music composition at UCSD, La Jolla, CA |

6/75

RONCIN Didier

66 avenue du Maréchal Joffre, 92700 Colombes, FRANCE

Groupe Art et Informatique, Université Paris VIII

oeuvres/works/opere -

Fab, 1975

(générateur de fonctions logiques COMPUTER LAB,
synthétiseur VCS-3 et magnétophone REVOX)

MPeC

Dole

(mini-ordinateur INTEL 8008, VCS-3 et REVOX)

MPeC

Ti-Pitch

(mini-ordinateur INTEL 8008, générateur de fonctions
logiques COMPUTER LAB, synthétiseurs VCS-3 et AKS)

MPeC

activité/activity/attività -

Développement du système de synthèse hybride existant
Orientation vers la synthèse à l'aide de dispositifs
digitaux commandés par microprocesseurs.

MPeC

MPeC

Composition et interprétation de musiques instrumentales
(claviers) et mixtes (synthèse par microprocesseurs et musique
instrumentale (claviers - percussions)).

MPeC

Participation au Groupe DANALAN 01 de musique répétitive et
light-show.

Projet de digitalisation du light-show, commande des projecteurs
dispos par microprocesseurs.

GMT

biographie/biography/biografia -

1952 né à Angers (FRANCE)

11/76

Moore School of Electrical Engineering, University of Pennsylvania, Philadelphia, Pennsylvania 19174, USA

Music Project at Moore School of Electrical Engineering

oeuvres/works/opere

<u>Lemniscate</u>	MPeC MCC
<u>Bach Fan</u>	MPeC MCC
<u>Fantasy on an English Carol</u>	MPeC
<u>Variations on a Theme of Steve Reich</u>	MPeC MCC
<u>Fall Gently on Thy Head</u>	MPeC
<u>The Egged-Bus-at-the-Dung-Gate Blues</u>	MPeC
<u>Breakdown</u>	MPeC MCC
<u>The King of Denmark is dead</u>	MPeC
<u>Deus ex Machina</u>	MPeC
<u>Prayer Wheel</u>	MPeC MCC
<u>Byte Pipes Revisited</u>	MPeC MCC
<u>Plaisirs d'Amour</u>	MPeC MCC
<u>Variations on a Note</u>	MPeC MCC
<u>Cambridge Memories</u>	MPeC MCC

programmes/programs/programmi

EUTERPE-8
PDP-8 assembly language
Parallel processing system for performing up
to four voices of counterpart through
voltage-controlled sawtooth generators

MPeC

Library of LISP functions for the study
of Schenkerian analysis MTS/LISP
Univac Series 70 Model 46

CAMA

textes/writings/testi

SMOLIAR, Stephen W.
"BASIC RESEARCH IN COMPUTER-MUSIC STUDIES."
Interface 2, 2, Utrecht, Dec. 1973. 121-125

GMT

"COMMENTS ON MOORER'S 'MUSIC AND COMPUTER
COMPOSITION'."
Communications of the Association for Computing
Machinery

MCC

"A DATA STRUCTURE FOR AN INTERACTIVE MUSIC
SYSTEM."
Interface 2, 2, Utrecht, Dec. 1973. 127-140.

MPeC

"EMOTIONAL CONTENTS SONSIDERED DANGEROUS."
Communications of the Association for Computing
Machinery 17, 3, Mar. 1974. 164-165.

MCC

"MUSIC THEORY -- A PROGRAMMING LINGUISTIC APPROACH."
Proceedings of the Association for Computing
Machinery 1972 Annual Conference, Aug. 1972.
1001-1014.

MPeC

MCC

CAMA

A PARALLEL PROCESSING MODEL OF MUSICAL STRUCTURES.
Massachusetts Institute of Technology Project MAC
Artificial Intelligence Report N° 91, Cambridge,
Sept. 1971. 276p.

MPeC

MCC

CAMA

6/75

cont.

"PROCESS STRUCTURING AND MUSIC THEORY."
Journal of Music Theory 18, 2, Fall 1974. 308-336.

CAMA

"SYSTEMIC ASPECTS OF MUSICAL ACTIVITY."
Gesellschaft für Informatik e.v. 3. Jahrestagung;
Lectures Notes in Computer Science, 1, Springer
Verlag, 1973. 246-250.

CAMA

-----, WILLSON, J.
"PROPOSAL FOR AN INTERACTIVE COMPUTER-MUSIC
FACILITY."
Numus West 5, 1974. 39-43.

MPeC

activité/activity/attività -----

Real-time all-digital sound synthesis (with M. Joseph
WILLSON)

MPeC

Computer-assisted musical analysis using LISP, with
particular attention to relationships between
Schenkerian analysis and natural language processing
and the melodic implication/realization model
(with Robert E. FRANKEL, Stanley J. ROSENSCHEIN, and
Eugene NARMOUR)

CAMA

Studies in data structures for the representation of music
notational system (with Catherine Downes)

CAMA

biographie/biography/biografia -----

1946 born Philadelphia, Pennsylvania USA
1967 S.B., Mathematics, MIT
1971 Ph.D., Applied Mathematics, MIT
1971-73 Lecturer, Department of Computer Science,
Technion-Israel Institute of Technology
1973- Assistant Professor of Computer Science,
University of Pennsylvania

6/75

STEEDMAN Mark

Center for Research into Perception and Cognition,
University of Sussex, Brighton U.K.

programmes/programs/programmi

Various programs for the analysis of harmonic and
metrical structure in tonal music.

CAMA

textes/writings/testi

LONGUET-HIGGINS, H.C., STEEDMAN, M.J.
"ON INTERPRETING BACH."
in MACHINE INTELLIGENCE 6, B.Meltzer & D.Mitchie, eds.
Edinburgh University Press, Edinburgh, 1970

CAMA

biographie/biography/biografia

1965-68 B.Sc. in Experimental Psychology, Sussex
1968-69 Diploma in Machine Intelligence, Edinburgh
1969-73 Ph.D. in Artificial Intelligence, Edinburgh
1973- Research Fellow, Sussex

6/75

STRANG Gerald

6500 Mantova St., Long Beach, California 90815 USA

Professor of Music Emeritus, California State University, Long Beach, California 90840 USA

oeuvres/works/opere

Composition #3, 1963
(Bell Telephone Laboratories)

MPeC

Composition #4 Experand, 1965
(UCLA, IBM 7094)

MPeC

Composition #5, 1966
(UCLA, IBM 7094)

MPeC

Composition #6 Decima, 1969
(UCLA, IBM 7094)

MPeC

Composition #7 Tripla Decima, 1969
(Bell Telephone Laboratories, GE 635)

MPeC

Composition #8, 1971
(UCLA, IBM 360/91)

MPeC MCC

Composition #9 Prelude & Fugue, 1972
(UCLA, IBM 360/91)

MPeC MCC

Composition #10 Atmosonus, 1972
(UCLA, IBM 360/91)

MPeC MCC

programmes/programs/programmi

My COMPOSITIONS make use of various versions of Max V. Mathews' MUSIC IV and V, either at Bell Telephone Laboratories or at UCLA.

The UCLA versions were developed with the technical assistance of Dr. John Gardner, who optimized the programs into very fast and versatile tools.

6/75

textes/writings/testi

STRANG, Gerald.

"THE COMPUTER IN MUSICAL COMPOSITION."

Computers and Automation 15, 8, Aug. 1966. 16-17.

reprinted in CYBERNETIC SERENDIPITY,

Studio International, London, New York, 1968. 26-28.

"MUSIC AND COMPUTERS."

in THE MAN-COMPUTER TEAM,

American Federation of Information Processing Societies
Los Angeles, 1967.

"THE PROBLEM OF IMPERFECTION IN COMPUTER MUSIC."

in MUSIC BY COMPUTERS, Heinz von Foerster & James W.
Beauchamp, ed., John Wiley and Sons, New York, 1969.
133-139.

"ETHICS AND ESTHETICS OF COMPUTER MUSIC."

in THE COMPUTER AND MUSIC, Harry B. Lincoln ed.,
Cornell University Press, Ithaca, 1970. 37-41.

activité/activity/attività

Development of programming devices and composing routines to permit the composer to delegate to the computer much of the routine and detail in elaborating and developing his musical ideas.

biographie/biography/biografia

- | | |
|---------|---------------------------------------------------------|
| 1908 | Born in Claresholm, Alberta, Canada. |
| 1928 | A.B., Stanford University, California. |
| 1948 | Ph. D., University of Southern California, Los Angeles. |
| 1937-69 | Professor of Music, various colleges and universities. |
| 1957- | Consultant on musical acoustics and electronics. |
| 1969- | Lecturer on electronic music, UCLA. |

SUCHOFF Benjamin

State University of New York at Stony Brook, Stony Brook,
New York 11790, USA

Center for Contemporary Arts and Letters

textes/writings/testi—

SUCHOFF, Benjamin

"BARTOK, ETHNOMUSICOLOGY, AND THE COMPUTER."

ICRH Newsletter 4, 4, Dec. 1968. 3-6

CAMA

"THE COMPUTER AND BARTOK RESEARCH IN AMERICA."

Journal of Research in Music Education 19, 1, Spring 1971.
3-16.

CAMA

"COMPUTER APPLICATIONS TO BARTOK'S SERBO-CROATIAN
MATERIAL."

Tempo 80, London, Spring 1967. 15-19.

CAMA

"COMPUTERIZED FOLK SONG RESEARCH AND THE PROBLEM OF
VARIANTS."

Computers and the Humanities 2, 4, Mar. 1968. 155-158.

CAMA

"COMPUTER-ORIENTED COMPARATIVE MUSICOLOGY."

in THE COMPUTER AND MUSIC, Harry R. Lincoln, ed.,
Cornell University Press, Ithaca, 1970. 193-206.

CAMA

"SOME PROBLEMS IN COMPUTER-ORIENTED BARTOKIAN
ETHNOMUSICOLOGY."

Ethnomusicology 13, 3, Sept. 1967. 489-497.

Revista de Etnografie si Folclor 14, 5, 1969, Bucarest.
343-352.

Muzsika 13, 7-8, Budapest, 1970.

CAMA

Suchoff Benjamin

activité/activity/attività

The COMMPUTE Program: The primary objective is to establish union catalogues (UNCAT) of encoded melody beginnings (INCIPITEX), annotation classes for use with the GRIPHOS system of data base processing (ANNOTAClass), music archives/collections materials (ARCHIVAMAT), and related published reference materials (REFEREMAT) in a fully permutable form suitable for use on an international basis. Another objective is to establish support systems for microform duplication, automated retrieval, and subsequent electrostatic printing of source materials; for machine analysis of audio materials to determine performance peculiarities, and for machine synthesis of encoded incipits and other digitalized data base items that are convertible to analog form.

6/75

TAYLOR Robert F.

868 1/2 E.Kensington Rd., Los Angeles, California 90026 USA

(NASA) Jet Propulsion Laboratories of the California Institute of Technology, 4800 Oak Grove Dr., Pasadena, California 91103 USA

oeuvres/works/opere—

Combinatorial Identities, 1974

3 versions, respectively for computer alone, for viola and computer, and for viola, harpsichord and piano.
(The version for computer alone was realized on the IBM System 360/50 and converted to two track stereo sound on the DAC at the University of New Hampshire. Digital sound synthesis programs were MUSIC360, principally in IBM System 360 Assembler Language (i.e., compiler and most routines, excepting main program, in Fortran). Programming in MUSIC360 source language, with additional Fortran subroutines.)

MPeC

activité/activity/attività—

I am presently composing a work for Baritone voice and computer. The principal "instrument" is based on the Chowning model of a frequency modulation type.

MPeC

An additional project consists of continuing studies (numerical analysis) of certain features of the twelve pitch class system ; this involves, among other things, the rewriting of a rather lengthy program in extended Fortran IV, lost (alas) in transit from Berlin to Amsterdam by (and I wish to make this announcement (caveat emptor !)) Pan American Airways.

CAMA

Studies in instrument design which border on Artificial Intelligence.

MCC

Preparation, with violist Walter Trampler, of the final version of Combinatorial Identities (for viola and computer) on commission of the National Endowment for the Arts of the United States.

GMT

biographie/biography/biografia—

- 1931 Born in Springfield, Missouri
1940-51 Studied and played professionally (Horn)
1951-53 Played in USAF orchestra
1955 Began studies in composition with Ernst Krenek
1956-62 Studies at U.S.C. and Princeton
1962-64 Accademia Nazionale S. Cecilia (Laurea)
1965-72 Research with digital computers in musical systems and composition, Berlin and Utrecht (Holland).
1972-75 Work with digital sound synthesis programs, with John Rogers, University of New Hampshire

6/75

TENNEY James

P.O. Box 343, Saugus, California 91350 USA

California Institute of the Arts, Valencia, California
91355

oeuvres/works/opere —————

Analog N°1 -- Noise Study, 1961

MPeC

Stochastic String Quartet, 1963

MCC

Dialogue, 1963

MPeC MCC

Ergodos I, 1963

MPeC MCC

Phases, 1963

MPeC MCC

Music for Player-Piano, 1964

MCC

String Complement

MCC

Ergodos II, 1964

MPeC MCC

Fabric for Ché, 1967

MPeC

For Anne (rising), 1969

MPeC

Spectral CANON for CONLON Nancarrow, 1974

MCC

Two Pieces for Mechanized Drum, 1975

MCC

disques/records/dischi —————

Analog N°1 -- Noise Study
Decca, 1964

Stochastic Quartet
Decca, 1969

6/75

Tenney James

programmes/programs/programmi

Works produced from 1961 through 1969 made use
of the MUSIC V system (and its predecessors)
at the Bell Telephone Laboratories in New Jersey.

textes/writings/testi

TENNEY, James
"COMPUTER MUSIC EXPERIMENTS, 1961-1964."
Electronic Music Reports 1, Sept. 1969. 23-60.

"MUSIC AND COMPUTERS."
in THE 1967 McGRAW-HILL ENCYCLOPEDIA OF SCIENCE
AND TECHNOLOGY, McGraw-Hill, New York, 1967.

"SOUND-GENERATION BY MEANS OF A DIGITAL COMPUTER."
Journal of Music Theory 7, 1, Spring 1963. 24-70.

activité/activity/attività

Since 1970 I have not had a large computer available
to work with, but I have continued to use small computers
in various ways as an aid to composition and musical
analysis.

biographie/biography/biografia

1934 born Silver City, New Mexico
1952-54 University of Denver, Engineering School
1954-55 Juilliard School of Music, NYC
1956-58 Bennington College, Vermont; B.A.
1959-61 University of Illinois, Urbana; Composition with
Kenneth Gaburo, electronic music techniques with
Lejaren Hiller, conducting with Bernard Goodman.
M. Mus.
1956-65 informal studies with Carl Ruggles, Edgard Varèse,
and John Cage.
1961-64 Associate Member of Technical Staff, Bell Telephone
Laboratories.
Currently on the Music faculty of the California Institute of
the Arts, Valencia, California (since Sept. 1970)

6/75

TISCHLER Hans

711 E. First Street, Bloomington, Indiana 47401 USA

Professor, Department of Musicology, School of Music, Indiana University, Bloomington, Indiana 47401 USA

textes/writings/testi _____

CEEM (Complete Edition of the Earliest Motets, ca.1190-1270). Yale University Press, New Haven, Conn., 1976.

CAMA

biographie/biography/biografia _____

- 1915 Born in Vienna, Austria
1930-36 Studies in piano, conducting, and composition at New Vienna Conservatory and State Academy with Paul Wittgenstein, Oswald Kabasta, and Franz Schmidt
1933-37 Studies at Vienna University : Ph.D. (musicology), Profs. Lach, Orel, Haas, Wellesz, Nowak
1940-42 Studies at Yale University : Ph.D. (musicology), Prof. Schrade
1945-47 Professor at W.Va. Wesleyan College
1947-65 Professor at Roosevelt University, Chicago
1965- Professor at School of Music, Indiana University.

6/75

TRUAX Barry

Dept. of Communication Studies, Simon Fraser University,
Burnaby 2, B.C., Canada V5A 1S6

oeuvres/works/opere

Tape VII, from Gilgamesh ("Journey to the Gods")
Utrecht, 1973

Sonic Landscape № 3, 1975
a spatial environment with four computer-synthesized
sound tracks, Vancouver, 1975
Trigon, 1975, for trio and quadraphonic tape
(tape & live parts), Vancouver, 1975

textes/writings/testi

TRUAX, Barry
"THE COMPUTER COMPOSITION SOUND-SYNTHESIS PROGRAMS
POD4, POD5 AND POD6."
Sonological Reports 2, Institute of Sonology,
Utrecht, 1973. 57p.

"COMPUTER MUSIC IN CANADA."
Numus West 8, 2, 2, Spring 1975. 17-26.

"GENERAL TECHNIQUES OF COMPUTER COMPOSITION
PROGRAMMING."
Numus West 4, 1973. 17-20.

THE POD PROGRAMS FOR SOUND SYNTHESIS AND COMPOSITION
AT SIMON FRASER UNIVERSITY.
Dec. 1974, 23p. N.d., dactylo.

"SOME PROGRAMS FOR REAL-TIME COMPUTER SYNTHESIS AND
COMPOSITION."
Interface 2, 2, Dec. 1973. 159-162.

6/75

activité/activity/attività—

The POD family of programs are designed for real-time sound synthesis and interactive compositional work. They were first developed by the author at the Institute of Sonology, Utrecht, Netherlands during 1972-73, and have since been re-instated and extended at Simon Fraser University.

The synthesis method for the POD5 version employs fixed waveforms with amplitude modulation or two-channel output as options. The POD6 version, which has seen the most use, utilizes a real-time version of John Chowning's frequency modulation method of timbral synthesis. Although both methods are limited to monophonic real-time output, the complexity and richness of sound produced, particularly in the POD6 FM system with its time-dependent spectra, has rendered the programs interesting and useful to composers in Canada and the Netherlands.

In Utrecht, the system runs on a PDP-15 machine (24K), and in Vancouver on a Hewlett-Packard 2116 (16K), the original version having been designed for 12K. Sampling rates for the POD5 program are generally above 40K, and for the POD6 system about 18K in Utrecht, and 10K in Vancouver.

The compositional method involves the selection of sound objects (potentially synthesized sounds without specific pitch or loudness) to be distributed in a random, Poisson-determined frequency/time field whose density and frequency range are variable in time. Various performance variables realize the theoretical distribution in ways whose effects can be heard immediately upon specification. The compositional method operates at both the syntactic and sonic levels, the primary task of the user being that of defining the inter-relationship between the two.

1998 Pacific Ave. Unit 105, San Francisco, California 94109, USA

programmes/programs/programmi —————

MUSTRAN II

FORTRAN, UNIVAC 1106, or 1107 or 1108 or UNIVAC 1110 or 1110/nm or IBM 360 or 370 (OS) or CDC 6000 or 7000 or CYBER 70. (Program Listings Decks or Tapes available)

This program is the MUSic TRANslator which reads music encoded using the full MUSTRAN II notation and produces an output file used as input for music analysis, music printing and music performance.

MEK

CAMA
MPrC
MPeC
GMT

TCOMB

FORTRAN (same availability as MUSTRAN II)
Reads the output file produced by the MUSTRAN II program and does an extensive analysis of the melody line of each piece of music.

CAMA

TPAT1, TPAT2, TPITC, TRYTA

FORTRAN (same availability as MUSTRAN II)
Each one of these programs reads the output file produced by the MUSTRAN II program and analyses the melody line of each piece of music. TPAT1 and TPAT2 are concerned with interval strings of 3 and 4 notes. TPITC analyzes interval usage. TRYTA performs a simple rhythmic analysis.

CAMA

XFTOC, XFMRG, XFSRT

FORTRAN (same availability as MUSTRAN II)
These are a series of independant utility programs for manipulating files of translated music data.
XFSRT sorts the contents of a file according to a user specified sort order.

GMT

JABST, JCNVR, JGTGV, JHWRW, JITEM, JMURW, JOPTN,
JNSNG, JPRSU, JSNGW, JSORT, JSPRD

FORTRAN (same availability as MUSTRAN II)
These are a series of independent library subroutines available to the user for processing the translated data produced by MUSTRAN II.

GMT

textes/writings/testi

WENKER, Jerome R.

A COMPUTATIONAL METHOD FOR THE ANALYSIS OF
ANGLO-AMERICAN FOLKSONGS.

MA Thesis, Indiana University, Sept. 1964. 271p.

MEK
CAMA

"A COMPUTER-ORIENTED MUSIC NOTATION INCLUDING
ETHNOMUSICOLOGICAL SYMBOLS."

in MUSICOLGY AND THE COMPUTER, Barry S. Brook, ed.,
City University of New York Press, New York, 1970.
91-129.

MEK

"MUSTRAN II: A FOUNDATION FOR COMPUTATIONAL
MUSICOLOGY."

in COMPUTERS IN THE HUMANITIES, J.L. Mitchell, ed.,
Edinburgh University Press, 1974. 267-282.

MEK
GMT

activité/activity/attività

1. I am currently working on my Ph.D dissertation which is
a computer analysis of the melodies of 92 Anglo-Canadian
folksongs.

CAMA

2. I edit and publish the Computational Musicology Newsletter.

CAMD

3. A paper "On the Indexing of Melodies" has been prepared.
This will direct research towards the computer comparison
of melodies.

CAMA

4. A program to produce MUSIC V input data from MUSTRAN II
data is in process of implementation. (a similar program is
working at Indiana University.)

MPeC

5. Initial work has begun on a routine to generate MUSTRAN II
input data. This will form part of a general system for music
composition.

MCC

6. Initial design has begun on a program to print complex
scores using MUSTRAN II data. (Don Byrd at Indiana University
has a working program which can use MUSTRAN II data as input.

MPrC

7. A long term project will be the completion of all parts of
a system which will allow the user to use the computer to:
first, compose and perform music; second, to analyse his
results in order to improve his composition; and third,
when he is satisfied with his composition he can produce
printed music for copyright and publication purposes and
he can also produce audio recordings for performance and
publication.

GnT

MEK

MPrC

MPeC

MCC

CAMA

cont.

8. Applications of MUSTRAN II in CAME music education are being considered. A subset of the MUSTRAN II notation suitable for mini-computers is being documented.

CAME

9. Computer projects on Indexing & cataloging Anglo-American folksongs have been designed and documented. Future work depends on available time.

CAMD

biographie/biography/biografia

1934 born in Minneapolis, Minnesota
1952-56 student at the Massachusetts Institute of Technology (B.S. Math, 1956)
1956-60 worked at M.I.T. with numerically controlled machine tools (A.P.T.)
1960-64 graduate student at Indiana University (MA Folklore, 1964)
1961-65 graduate assistant at Indiana University in Computational Linguistics
1966-69 worked for UNIVAC in systems Programming
1969-70 worked for Computer Science Corp.
1971-72 graduate Student at Indiana University in Folklore
1972- work for UNIVAC as a Data Processing Consultant

7/75

274 East 14th Avenue, Columbus, Ohio 43201 USA

The Ohio State University/IRCC,
1971 Neil Avenue, Columbus, Ohio 43210 USA

OSU - Computational Musicology Group

programmes/programs/programmi

MAP

SPITBOL/SNOBOL, IBM 360/370

Musical Analysis Package is an interactive system for analyzing machine readable scores. There are over seventy analytic/data manipulative commands (programs) available to the user. The user determines the sequence of the programs and input data for each step.

CAMA

SLAM

SPITBOL/SNOBOL, IBM 360/370

Simple Language for Analyzing Music is a batch-type command language system. It is virtually syntax-free and includes all the operations available in MAP as well as user defined structures (macros) and loops.

CAMA

LAZY CODE

SPITBOL/SNOBOL, IBM 360/370

LAZY CODE is a simple vertical-linear encoding language. One can define pitch-patterns, note-value patterns, and vertical structures. With appropriate definitions, more than ten measures of Hannon's Finger Exercises for the Piano can be encoded via a single character.

MEK

activité/activity/attività

I am currently team chief of the humanities' programming team. We specialize in data analysis.

CAMA

I am getting further into helping teach courses with, and for, the Department of Music. The computer is an aid in these particular courses.

CAME

I hope to increase the power and ease of using MAP and SLAM.

CAMA

biographie/biography/biografia

1941 Born

1966 Began computer-ing

6/75

5500 S.W. 84 Terrace, Miami, Florida 33143 USA

University of Miami, School of Music, Coral Gables, Florida 33124

programmes/programs/programmi

- Various computer-generated indexes :
-Research in Process in Music Education
-Studies in the Psychology of Music
-Bertha Foster Memorial Music Collection
-Children's Songs in Collections
-Opera Reviews in THE NEW YORK TIMES
-Premieres reported in THE NEW YORK TIMES
-New Music in the U. of Miami Library
-Music Library Record Analytics
-Dissertations in Progress in Music Education

CAMD

textes/writings/testi

YOUNGBLOOD, Joseph E.
"ROOT PROGRESSION AND COMPOSER IDENTIFICATION"
in THE COMPUTER AND MUSIC, H.B.Lincoln, ed.,
Cornell University Press, Ithaca, 1970. 172-178

CAMA

"ONGAKU HASSEI YOH 'MUSIC V PROGRAM'" (Music Synthesis
Using the MUSIC V Program)
University of Tokyo Computer Centre News, 1972

MPeC

"KEISANKI-NI YORU ONGAKU-NO GOHSEI" (Generating Music by
Computer)
Bit, 1972

MPeC

"COMPUTER MUSIC" (a letter to the editor)
Computer and the Humanities 7, 1, Sept. 1972. 28.

MPeC

activité/activity/attività

1. Attempting to obtain a digital-to-analog converter in order to implement MUSIC V at the University of Miami
2. Various programs for Computer Assisted Instruction
3. Various programs for musical analysis

MPeC

CAME
CAMA

biographie/biography/biografia

- 1930 Born, Chicago, Illinois
1948-49 U.S.Navy
1950 University of Tulsa
1950-54 University of Oklahoma, B.Mus. (Music Theory, Piano)
1955-60 Indiana University, Ph.D. (Music Theory, Linguistics)
1958-61 Instructor (Music, Languages), Brescia College, Owensboro, Kentucky
1961-75 Professor (Music Theory, Musicology), University of Miami, Coral Gables, Florida
1971-72 Visiting Professor (Information Science), University of Tokyo, Japan

6/75

**annexe /
appendix /
appendice :** 1



RETROSPETTIVA INTERNAZIONALE COMPUTER MUSIC '75

Groupe Art et Informatique de Vincennes
Autunno Musicale a Como

Co-ordinators / Coordonnateurs

Jacques ARVEILLER, Giuseppe G. ENGLERT, Patrick GREUSSAY

Postal address / Adresse postale

R.I.C.M.75, c/o J.ARVEILLER

15 Bd Saint Germain, 75005 PARIS, FRANCE

The "Musical Autumn in Como" will take place in September / October 1975. Among the varied activities of this festival, there will be a week devoted to contemporary music, during which will be organized this International Retrospective of Computer Music.

A major point in this festival is that all manifestations are free to the public.

The R.I.C.M.'75, which will last 7 days, plans :

- 1/ Permanent occupancy of premises where "computer artists" equipped with their implements (teletypes and plotter connected with a computer) will work in continuous contact with the public, where scores and programs will be on display, and where tape-recorders with headphones will be at the public's disposal for "non-stop" audition of music produced with the assistance of computers.
- 2/ Publication of a catalogue, as extensive as possible, about composers, musicologists, acousticians, music educators, programmers, groups, etc. who are working all over the world on music and computers. This catalogue will be sent to each of the contributors as soon as it is printed.
- 3/ Organization every night of a concert of instrumental and tape music made with the assistance of computers.

We would like to see your work presented in this retrospective, and this is why we ask you to send us as soon as possible, in any case before June 30 , 1975 :

- 1/ A document (typed if possible, single space, and on the same size paper as the one on which these lines are written) intended to be printed just as it is, and included in the catalogue. One will find helpful for writing this document the enclosed form, and make use if possible of the minimum set of questions also enclosed herewith. To this document can be added :
- 2/ Magnetic tapes ($7\frac{1}{2}$ IPS = 19 cm/s, full track or 2 track stereo), carrying works, fragments of works, or samples produced with the assistance of computers, and intended to be presented at the R.I.C.M.'75, either through headphones or/and in concert. It is to be desired that each work be accompanied by a short notice explaining where the computer comes in (composition, sound synthesis, etc.). These tapes will be sent back if the author requires it ; otherwise they will be kept in the library of the "Groupe Art et Informatique de Vincennes" (Université PARIS VIII).
- 3/ Scores or reproductions of scores intended :
 - to be exhibited (with a short explanatory note)
 - to be possibly performed in concert during the R.I.C.M.'75 (the following musicians agree to participate : solo pianist, solo clarinet, solo harpsichord, string quartet, with a rather limited rehearsal time however).Like the tapes, these scores will be either sent back, or kept in the library, according to the author's wish.
- 4/ Articles, thesis, texts, etc. related to computer music, particularly if they are not very well known, intended for the library of the "Groupe Art et Informatique de Vincennes" (Université PARIS VIII).

Anyhow it is bound to happen that this paper, sent to about 150 persons (mostly North-Americans), will not reach every person involved. Could you therefore communicate (or still better photostat and distribute) these pages to those colleagues who are concerned but who might not have been contacted ?

This will make our catalogue even more comprehensive (a supplement to this catalogue will be printed later if needed).

**annexe /
appendix /
appendice : 2**

Name / Nom

1st name / Prénom

Private address / Adresse personnelle

In position at / lieu d'exercice

Are you a member of a computer music research / performing group ? /
Etes-vous membre d'un groupe travaillant sur l'informatique musicale ?

List of musical works made with the help of computers /
Liste des œuvres musicales réalisées à l'aide d'ordinateurs

Keywords* /
Mots-clés*

* List of keywords to be used / Liste des mots-clés à utiliser

GMT General or Multiple Topics

MPeC Music Performed by the Computer

MEA Music Encoding - Analog

MCC Music Composition by the Computer

MEV Music Encoding - Visual

CAMA Computer Aided Music Analysis

MEK Music Encoding - Keypunch

CAMD Computer Aided Music Documentation

MPrC Music Printed by the Computer

CAME Computer Aided Music Education

Discography / Discographie

Keywords /
Mots-Cles

List of major programs and systems (and their functions) /
Liste des principaux programmes et systèmes (et ce qu'ils
font)

*List of published writings about computer music & musicology /
Liste des textes publiés sur l'informatique musicale*

*Keywords /
Mots-Cles*

Biography / Biographie

What is your present activity in the field of computer music ?
(work in progress, projects, utopias, etc.) /
Que faites-vous actuellement dans le domaine de l'informatique
musicale ? (travaux en cours, projets, utopies, etc.)

Keywords /
Mots-Cles

**annexe /
appendix /
appendice : 3**

Name / Nom **LIPSTICK**

1st name / Prénom Otis W.

Private address / Adresse personnelle c/o Sanchez RAMONOL
3624 Silent Spring Lane
Wakapoogee, Old Hampshire 99999, USA

In position at / lieu d'exercice Computer Music Lab.
Wakapoogee Junior High School
Wakapoogee, Old Hampshire 99999, USA

Are you a member of a computer music research / performing group ? /
Etes-vous membre d'un groupe travaillant sur l'informatique musicale ?

SCHMALZ Commutative Computer Music Group

List of musical works made with the help of computers /
Liste des œuvres musicales réalisées à l'aide d'ordinateurs

Keywords* /
Mots-clés*

Exotic Cocktail for symphony orchestra, 1967, 4h17'
Boosey and Peters, New York
(BLLSHT program by Seymour T. Humpf, generating
woodblock pitches)

MCC

Bitumes IV for 2-tracks tape, 1968, 4'12"
(HCSS program by Otis W. Lipstick, digital sound
synthesis, and GLP system by Buck F. Tangerine,
computer-controlled EMS-VCS3 synthetizer)

MPeC

551-26-79 for ten tubas, 1971, duration indetermined
(PLOTPLOT program by IBM Corp., plotted graphic
score, and on-stage sound manipulations by mini-
computer)

-MPrC MPeC

* List of keywords to be used / Liste des mots-clés à utiliser	
GMT General or Multiple Topics	MPeC Music Performed by the Computer
MEA Music Encoding - Analog	MCC Music Composition by the Computer
MEV Music Encoding - Visual	CAMA Computer Aided Music Analysis
MEK Music Encoding - Keypunch	CAMD Computer Aided Music Documentation
MPrC Music Printed by the Computer	CAME Computer Aided Music Education

Discography / Discographie

Keywords /
Mots-Cles

Exotic Cocktail, 5 records, Multicorn BWV 2887-1 to
2887-5

- MCC

Bitumes IV and 551-26-79, on "The exotic computer
of Otis W. Lipstick", Mecca 5666 S

MPr C MPeC

List of major programs and systems (and their functions) /
Liste des principaux programmes et systèmes (et ce qu'ils
font)

KURD (written with Alastair Sack)

- CAMA

LISP 1.5, CAB 500 computer

Harmonic analysis of Kurdistan Nursery Rhymes of
the IXth century B.C. (Listing available)

HCSS (Home Cooked Sound Synthesis)

MPeC

FORTRAN IV, HAL computer

Digital sound synthesis derived from MUSIC 10
program, using a home-made D/A converter (Listing
available)

GUANO (General purpose User-oriented ANalytical
Operating system)

MCC

BLISS, Digital PDP-10 computer

Generation of personnalized skills of musical com-
position (Listing Available)

List of published writings about computer music & musicology /
Liste des textes publiés sur l'informatique musicale

Keywords /
Mots-Cles

LIPSTICK Otis W.
Old time stochasticities : a survey.
Comput-o-matic Newsletter, 14, 4, pp 768-875
Honolulu, Hawaii, 1964.

GMT

LIPSTICK Otis W. and RAMONLO Sanchez
Eine mit Hilfe des Computers durchgeführte Studie
Über den Begriff Humor in der Musik.
Proceedings of the Fall Joint Conference on Joy and
Fun in Music, pp 3057-3058
Berlin, 1966

CAMA

LIPSTICK Otis W.
Contribution à l'étude informatique de la perception
de l'espace musical dans l'esthétique transcendante
de Kant
Thèse de doctorat, Sorbonne, Paris, 1966
(traduzione italiana : Edizioni Universitarie, Fonda-
zione Buitoni, Genova, 1967)

GMT

LIPSTICK Otis W., LIPSTICK Thelma J. and LIPSTICK Oscar B.
An introduction to computer-generated musical thin-
king : a listener's guide
Les Editions Pratiques Rustine, Liège, 1972

CAME

Biography / Biographie

- 1914 Born in Sarajewo, Serbia
1922-54 Studies in tuba, composition and esthetics
at the Ljubljana Conservatory with Dimitri
Chichikov and Roster Varup
1954-60 Active as an Air Force dentist in Sion A.F.
base, Switzerland
1961-66 Studies in Musical Pataphysics in Paris,
Thesis
1967-73 Chief manager of a pilot research project
in a major French computer firm. Fired.

What is your present activity in the field of computer music ?
(work in progress, projects, utopias, etc.) /
Que faites-vous actuellement dans le domaine de l'informatique
musicale ? (travaux en cours, projets, utopies, etc.)

Keywords /
Mots-Cles

I am desperately trying to merge the music and
computer science departments of the Wakapoogee
Junior High School.

CAME

The little energy left is spent on a computer
music project called SCHMALZ (an autoprogam-
ming computer network using violin sounds for
remote control of artificial satellites). I
feel very lonely in this project; could people
working on the same basis send to me some
postcards and listings ?

GMT MEA

In addition, I must mention the recent concerts
of computer music I organized in the Wakapoogee
Civic Auditorium with an on-stage CDC 6600 com-
puter and the help of "Les Boog-a-loos" vocal
group (Buck F. Tangerine, conductor).

MPeC