

ECOUTEZ, CANAILLES

■ Cloués par ces lignes, ■ Restez muets ■ Ecoutez ces hurlements de loup
 ■ Qui ressemblent à peine à un poème! ■ Donnez ici ■ Le plus gros ■ Le plus chauve, ■ Prenez au collet et poussez le ■
 Dans la boue et les comptes ■ Des Comités de l'aide aux affamés! ■ Regarde, ■ Tu vois ■ Derrière ces chiffres nus... ■ Un
 coup de vent ■ Fort et doux ■ Enveloppe dans la neige ■ Des milliers ■ De millions de toits, ■ La neige ■ Cercueil des
 villages du Volga. ■ Les cheminées, ■ Les cierges. ■ Même les corbeaux ■ Disparaissent, ■ Ils sentent ■ Que, fumante, ■
 Arrive ■ Douce et nauséabonde, ■ L'odeur ■ Du fils, ■ Du père, ■ De la mère, ■ De la fille ■ Que l'on rôtit. ■ De qui est-
 ce le tour? ■ Il n'y aura pas de secours, ■ Séparés par la neige, ■ Pas de secours, ■ L'air est vide! ■ Pas de secours! ■ Sous
 les pieds, ■ Même le mortier ■ On le dévore! Même les mauvaises herbes! ■ Non, ■ Pas de secours, ■ Il faut se rendre. ■
 Pour dix provinces ■ Mesurez les tombes. ■ Vingt millions ■ Vingt, ■ Couchez-vous, ■ Mourez! ■ Mais seule, ■ Avec une voix
 enrouée, ■ Avec de folles malédictions, ■ Les cheveux neigeux des chemins ■ Tirés par le vent, ■ Sanglote la terre. ■ Du
 pain, ■ Un peu de pain. ■ Encore du pain! ■ Elle même, voyant la mort en face, ■ Ayant à peine à manger, ■ Pour ne pas
 crever ■ La ville tend sa main ouvrière, ■ Une poignée de miette desséchées. ■ Du pain, ■ Un peu de pain, ■ Un peu de pain!
 ■ Les radio ■ Hurlent à toutes les frontières ■ Et comme réponse ■ Bêtises sur bêtises ■ Tombent dans les colonnes ■
 Des journaux. ■ „Londres, ■ Banquet, ■ Présence du roi et de la reine ■ Qui bouffent ■ Ce qui ne pourrait rentrer ■ Dans
 une bauge tout en or!“ ■ Soyez maudits! ■ Que ■ Pour votre tête couronnée ■ Des colonies ■ Accourent les sauvages ■ Les
 anthropophages, ■ Que ■ Brûle sur le royaume ■ L'incendie des révoltes! ■ Que ■ Vos capitales ■ Soient brûlées ■ Tout
 entières! ■ Que des princes héritiers, ■ Des princesses, ■ Le manger ■ Se prépare ■ Dans des couronnes marmites! ■ „Paris,
 ■ Réunion du Parlement, ■ Rapport sur la famine ■ Par Fridjof Nansen“. ■ On écoute en souriant ■ Comme un air de rossignol
 ■ Comme si on écoutait ■ Un ténor ■ Dans une romance à la mode. ■ Soyez maudits! ■ Que ■ Pour l'éternité ■ Vous n'en-
 tendiez plus ■ La voix humaine! ■ Prolétariat français ■ Hé! ■ Prends dans un noeud ■ Au lieu de discours, ■ Une foule de
 cous! ■ „Washington, ■ Les fermiers ayant bouffé, ■ Ayant bu, ■ Tellemnet ■ Qu'il leur faut ■ Une grue ■ Pour soulever
 leur pansel! ■ Dans la mer ■ Ils jettent le superflu ■ De la fine farine, ■ Chauffent les locomotives ■ Avec du maïs!“
 ■ Soyez maudits! ■ Que ■ Vos rues ■ Soient pleines de révoltes, ■ Que, trouvant ■ Les places les plus sensibles, ■ Sur le
 Nord ■ Et sur le Sud ■ De l'Amérique, ■ On joue de vos panses! ■ Comme des balles du foot-ball ■ „Berlin, ■ Les émigrés
 ressuscitent, ■ Leurs bandes sont satisfaites, ■ Avec les affamés ■ Ils se battent. ■ A Berlin, ■ Frisant sa moustache, ■ Marche,
 se vante, ■ Le patriote russe. ■ Soyez maudits! ■ Dehors! ■ Eternellement! ■ Dégoûtez tout le monde ■ Par votre air de Judas,
 ■ Poursuivi par le son ■ De l'or français, ■ Soyez errants ■ Pour l'éternité! ■ Forêts russes, ■ Rassemblez-vous, ■ Choisissez
 vos plus grands arbres, ■ Que leur image ■ Toujours pendue, ■ Se balance toute bleue ■ Contre le ciel! ■ „Moscou, ■ La
 rassembleuse se plaint: ■ A l'Empire, ■ On fait des grimaces, ■ On y donne trente roubles ■ Qui ne marchent plus ■ Depuis 1918!“
 ■ Soyez maudits! ■ Que cela soit ainsi: ■ Que chaque bouchée avalée ■ Vous brûle l'estomac! ■ Qu'un biftek saignant ■
 Se change en ciseaux ■ Et vous coupe les intestins! ■ Seront morts ■ Vingt millions d'hommes. ■ Au nom de tous ceux qui
 sont morts ■ Malédiction aujourd'hui ■ Jusqu'à l'éternité ■ A ceux qui ont détourné ■ Leur gueule bouffie ■ Du Volga! ■
 Cette parole n'est pas ■ Pour la panse remplie ■ Ni pour le trône du Tsar! ■ Dans un tel cœur ■ Les mots ne peuvent rien
 toucher. ■ Les touchent ■ Les lances des révolutions! ■ A vous ■ Petits atomes ■ D'une énorme armée, ■ Avec la force de
 qui ■ Avec la force ■ Jetée dans les sous-sol, ■ On fera sauter le monde ■ Des milliardaires! ■ A vous! ■ A vous! ■ A vous!
 ■ Ces paroles-là! ■ Avec des chiffres kilométriques ■ Faites le compte des bourgeois! ■ Le jour viendra ■ De l'incendie uni-
 versel ■ Purifiant et fumant, ■ Mettant sans dessus dessous ■ Les palais des riches! ■ Soyez aussi. ■ Soyez sans pitié, ■ A
 cette heure ■ Du châtiement!

BACKGROUND TO COMPUTER ART. NO. 3.**AUSTRALIA**

A UNESCO Seminar on Visual Communication and the Arts is planned for early 1971. Contact Professor C. E. Moorhouse, Department of Electrical Engineering, University of Melbourne, Parkville, Victoria, Australia.

ITALIA

Works by Franke, Lecci, Nake, Nees, Peterson and the Computer Techniques Group are on show in the Art and Technology section of the Venice Biennale, but the exhibition is rather disappointing in various ways, according to Auro Lecci.

ROMANIA

Jasia Reichardt has received a letter from Adrian Rogoz. He is producing invariant poems, and has published a historical study of 'Cyberarts' for the 1970 Almanach of the 'Science and Technic' periodical. He is continuing his research into the relations of art and computer and plans to write. He welcomes all forms of communication and literature. Adrian Rogoz, Intrarea Antrenorilor 1, Bucuresti - Sectorul 1, Romania.

SOUTH AMERICA

In June, the exhibition Arte e Cibernetica organised by Jorge Glusberg of CAYC in Buenos Aires was on show in Montevideo, Uruguay. This show will next be travelling to Lima (Peru), Asuncion (Paraguay), and Jerusalem (Israel). A selection of works from the CAS travelling exhibition has been sent to CAYC in Buenos Aires, and should be on show there during August. Artists are invited to send work for both the above permanent travelling exhibitions to: Jorge Glusberg, CAYC Elpidio Gonzalez 4070, Buenos Aires, Argentine. Alan Sutcliffe, Brandon House, Broadway, Bracknell, Berkshire, UK.

Waldemar Cordeiro, who took part in last year's Zagreb exhibition, sent us some news about the first exhibition of 'Computer Plotter Art' in Sao Paulo, which took place in March this year at the Mini Galeria USIS. W.C.'s address is paisagismo:planejamento e projeto Ltda. Rua Maranhao, 88 5.0 andar cj. 52 Sao Paulo, Brasil.

UNITED STATES

The Museum of Modern Art, New York, arranged an exhibition titled INFORMATION, organised by curator Kynaston McShine. See illustrated article in Newsweek, 20 July, 1970, page 48.

The Art Workers Coalition meeting takes place at 8 pm. 21 September, 1970 at 729 Broadway, New York.

POEM BY MAYAKOVSKY. TYPOGRAPHY BY EL LISSITZKY, BERLIN 1922.**SYMPOSIA, EXHIBITIONS: FUTURE**

IFIP World Conference on Computer Education. Amsterdam, August 24-28, 1970. Secretariat: IFIP, 6, Stadhouderskade, Amsterdam 13.

American Mathematical Society. Mathematical Association of America. Convention and Exhibition. University of Wyoming, Laramie, Wyoming. August 24-September 28, 1970.

IS PLANNING ORGANIZED DESTRUCTION? is the provocative title of a conference to be held 24 August-4 September at The Institute of Design, The Ateneum Building, Helsinki. This is a left-wing conference with a marked anti-Bauhaus bias. Should be great fun. Organised by the Association of Finnish Designers ORNAMO, Taidehalli, Aionkatu 3, Helsinki 10, Finland.

Brunel University announces seminars on aspects of computer graphics, on 8-10 September, 1970. These are presented by the British Chapter of the ACM. Accommodation, meals, available. For details write to: Mrs. J. Fox, Dept. of Computer Science, Brunel University, Uxbridge, Middlesex, England.

Seventh International Symposium on Mathematical Programming. The Hague. 14-18 September 1970. Contact: Prof. G. Zoutendijk c/o Computer Centre, Un. of Leiden, Stationplein, 20. Leiden, Holland.

FID International Congress Scientific Information. Buenos Aires, September 14-24, 1970. Contact: International Document Federation, US Nat. Comm. NAS 2101, Constitution Avenue, Washington, D.C. 20418.

4th. Annual Symposium. American Society of Cybernetics. Cybernetics and the Management of Ecological Systems. Washington D.C. October 1970. Contact: John McLeod, SCI POB 2228. La Jolla, California, 92037, U.S.A.

CALL FOR PAPERS

Mexico International Conference on Systems, Networks and Computers. IEEE, Oaxtepec, Mexico, January 19-21, 1971. 31 August, 1970, is deadline for submission of abstracts. Dr. Roberto Canales, R., Instituto de Ingenieria, Ciudad Universitaria, Mexico, 20 D.F. Mexico.

LONDON

It's a pity to be in London without seeing TIME OUT. Fortnightly, it is on sale in many parts of the West End and other parts.

The New Cinema Club is doing its best a la Calcutta to brighten up London. It also has a fairly tough social approach. Why not ask for their current brochure. 122 Wardour Street, London, W.1. 01-734 5888 - any time.

German Avant-Garde Films from the 20's and 30's. Eggeling, Richter, Moholy-Nagy, Deslaw. Thursday, August 27, at 6 pm. Arts Lab Cinema, 1 Robert Street, London, N.W.1. For details of membership ring 01-387 8980. During the week of 14-20 September, 1970, the Arts Lab will make its cinema available to film-makers attending the National Film Theatre's International Underground Film Festival for private/public screenings. Hundreds of people are expected to arrive in London for this event, and if anyone can house and/or feed film-makers and companions, please write to David Curtis at above address with details of the offer.

An interesting idea is contained in some duplicated sheets available from Terry Pendle, Experimental Resin Unit, c/o SPACE Ltd., Site 1, St. Katherine's Dock, London, E.1. At present engaged in running the Experimental Resin Unit with the help of SPACE and the Arts Council, he sees this as a prototype for a National Technological Centre for the Visual Arts.

Write in for details. The artist is available for visits to art colleges, and will show you round the Unit by appointment.

NOTHING is a greater contrast from computers than a visit to The Glasshouse, 27 Neal Street, London, W.C.2. 01-836 9785. As one enters, a glassmaker stands among the furnaces actually blowing glass. On cooling, it can be purchased and taken by air to the far corners of the globe. The Glasshouse is part of a plan to make an area in Covent Garden where artists can work and sell in studio conditions. It is managed by Pauline Solven. Aficionados of Whole Food may (literally) drop into the small restaurant that is due to open August/September, a few doors away.

COMPUTER 70 AT OLYMPIA

This major exhibition takes place at Olympia, London 5-9 October, 1970. Members of CAS can buy tickets for themselves and guests at the reduced price of 5s., (normal price £1). Please apply as early as possible to John Lansdown, enclosing cheque, etc.

In Computer 70 at Olympia, 5-9 October, 1970, the Computer Arts Society will be mounting an exhibition of Computer Art. The backbone of this show will be the CAS travelling exhibition, but members are invited to send their works for this occasion. If sending from abroad, please dispatch at once, and send letter advising of details of works, dimensions, etc. Don't forget to specify computer graphics as COMPUTER OUTPUT when filling in custom forms otherwise they will be delayed at the customs offices and will not appear before the British public. Members in Britain are advised to write in at once indicating the kind of works they wish to show; they will then be informed as to procedure re transport, etc. Send everything to the Secretary, John Lansdown. This art exhibition will be presented in a room on the first floor at Olympia measuring about 30 x 40 feet.

The designers of the CAS Computer 70 project are anxious to borrow 35mm slides showing all aspects of environment as affected by industry, urban planning, scientific development and so on. They are particularly interested in examples showing pollution in all its forms, social decay and ecological decline. Please send the slides, or description of them if you are in doubt about suitability to John Lansdown as soon as possible. They will be returned in October 1970. If you do not have slides but have ideas for visually striking representations of the themes also write in. Let us know if you have a collection of photographs (published or unpublished) which might be relevant.

COMPUDOME: AN OUTLINE

C.A.S. has now been given the go-ahead by B.E.T.A. (British Equipment Trades Association), to implement an interactive simulation game as the central feature of the forthcoming Computer '70 exhibition at Olympia from 5th-9th October.

The game concept has evolved after many stimulating brainstorming sessions, involving a wide cross section of C.A.S. membership. The final selection was somewhat constrained by the requirements of the exhibition organisers. There were requirements broadly of two sorts: (1) The exhibit should demonstrate clearly an application of computing in the immediate future and (2) it should do this within a pleasing environment. A simulation game has been developed which allows up to 16 players to make decisions about the allocation of resources in a limited resource situation. The effects of decisions from players interact so that it becomes extremely difficult to predict the outcome or stability of the system at any time. The game structure is based on a very simple mathematical interpretation of the dynamics of ecological systems. Because of this, the name, Ecogame, has been suggested but alternative suggestions are welcome.

As in real life, success in the game is difficult to define. A player may adopt a socially (i.e. good for the overall resource level in the system) beneficial policy at personal cost or he may adopt a selfish resource grabbing policy for himself at great social cost.

The effects of decisions will be displayed visually to all players and lookers-on by means of computer controlled slide projectors and the information required to make decisions will be presented to each player on his personal computer controlled visual display unit. Two computer systems will be installed to control the interaction and the whole game will be housed in a 35-foot diameter geodesic air conditioned dome.

G. L. Mallen 3.8.70.

SOFTWARE NOW FIRM

The SOFTWARE exhibition has been referred to in PAGE before (P3,6). After a series of delays, it is due to open on 17 September. It will be on show at the Jewish Museum, 1109 Fifth Avenue, New York, N.Y. 10028, till 8 November. It will then be transferred to the Smithsonian Institute, Washington, D.C. where it can be seen from 16 December till 14 February, 1971.

SOFTWARE has already received considerable attention; there can be no doubt that it will receive extensive world-wide publicity in all media, and will provoke discussion and comment for many years. The show is organised by Jack Burnham, the young author of Beyond Modern Sculpture, who is Professor of Art at Northwestern University.

Here follows a list of exhibitors as of June, 1970.

1. Vito Anconci. 2. David Antin. 3. Art and Technology, Inc., Boston. 4. John Baldessary. 5. Robert Barry. 6. Donald Burgoyne. 7. Agnes Denes. 8. Carl Fernbach-Flarsheim. 9. Giorno Poetry Systems. 11. Hans Haake. 12. Douglas Huebler. 13. Allan Kaprow. 14. Joseph Kosuth. 15. Les Levine. 16. Nicholas Negroponte and the Architecture Machine Group. 17. Van Schley. 18. Sonia Sheridan. 19. Smith-Kettlewell Institute of Visual Science. 20. Ted Victoria. 21. Lawrence Weiner.

Some of the hardware employed in the show includes time-sharing computers, teletype equipment, solar-powered radios, high-speed copying machines, closed circuit television. Visitors can browse on video terminals through an annotated multi-dimensional catalogue of the show, called a "hypertext". On request, information regarding details of the exhibition will appear on a display screen. On leaving the show, each reader will get his own personalized computer print-out of what he has read. In connection with the "hypertext" the visitor will be interacting with Labyrinth, a DEC PDP-8 computer with nine terminals, programmed by Art and Technology, Inc. of Boston.

The work that is certain to attract the most attention is called Seek, and will be presented by Nicholas Negroponte and the Architecture Machine Group at M.I.T. (See also under Symposia Past in this issue of PAGE). An attempt is made to discover if the animals called gerbils can tell architects and planners how humans react and adjust to a changing environment. What the spectator will see is forty furry gerbils moving around and disarranging 2,000 plastic cubes, at the same time that a mechanical grappler is rearranging the cubes to wall the animals in. Here is Burnham's comment. "Seek is the first piece of computer art. All previous computer art was a matter of using the computer to 'simulate' previous art ideas. In effect the computer never entered the art context. In this instance Seek acts as a paradigm for the idea of making art. Art could be rearranging blocks over and over again—just as sculpture is a matter of arranging forms infinitely. New aesthetics constantly force new arrangements in the same sense that the gerbils force the computer to model new possible environmental configurations."

The exhibition was initiated by The Jewish Museum, and made possible by a grant from American Motors. The Technical Advisor to the exhibition is Ted Nelson. The address of Jack Burnham is: Art Department, Northwestern University, Evanston, Illinois, 60201, U.S.A. For publicity material and photographs contact: Caroline S. Lerner/Joanne Lupton, RUDER and FINN Fine Arts, 110 East 59th Street, New York, N.Y. 10022, U.S.A. Phone (212) PL9-1800, and Eva Saaremaa at the Jewish Museum.

SYMPOSIA, EXHIBITIONS: PAST

For information on the Conference on Computer-Aided Architecture in July, 1970, write to N. Negroponte, Department of Architecture, M.I.T. Cambridge, Mass., U.S.A.

Generacion Automatica De Formas Plasticas is the title of the illustrated and informative exhibition catalogue issued by the Centro de Calculo de la Universidad de Madrid, Avenida Complutense s/n, Madrid, Spain. Write to Society member E. Garcia Camarero for a copy at above address.

Interactive Sound and Visual Systems is the title of an exceptionally interesting exhibition catalogue produced by Charles Csurik, Division of Art, College of the Arts, The Ohio State University, U.S.A.

The Minutes and Recommendations of the Calgary Conference on the Visual Arts, January, 1970, are available from the Editor in Chief, Richard Johnston, Dean, School of the Fine Arts, University of Calgary, Canada. Report is bilingual, 78 pages. This was a meeting of active painters, sculptors, curators and representatives of government agencies.

Under the title Computers and the Arts, a three-day seminar was held in the end of May, 1970. It was organized by the Centre for Communications and the Arts, Simon Fraser University. A Computer Film Festival, and an exhibition of computer graphics was included. Write in for documents to the University, Burnaby 2, B.C., Canada. It is planned to publish the proceedings in about a year's time.

The catalogue of the travelling exhibition Impulse Computerkunst is a presentable publication, with introductions (in German) by Konrad Zuse and Herbert W. Franke. But why, oh why, oy wei, must there always be the same computer graphics...the Boeing Man; Kennedy shot in the head; that telephone.

MUSIC

Works by John Cage (Amores, Watermusic, Waiting for Piano, Variation 2, Fontana Mix) and by Gyorgy Ligeti (Volumina for Organ) were recently played for the first time in the Soviet Union by the ensemble founded by Alexei Liubimov.

Quarto autumno musicale a como. This event takes place from 4 September till 4 October. From 1-4 October there will be demonstrations of the digital computer musical programme by Pietro Grossi. Other musicians will perform, plus computer films; an exhibition of Concept Art. Details from: am, p. cavour 34/22100 Como, Italy. Tel. 272518/265592.

ARBEITSTAGE FÜR MUSIK. In collaboration with Berliner Senat and the Akademie der Künste there will take place this event. It offers courses and seminars in theoretical and practical music work. Direction Dr. Wolfgang Burde. Fees: DM 150,-. The organisers will consider giving a grant to participating composers, instrumentalists. London's AMM will be among those giving a course. Dates: 15-25 September, 1970. Address: Arbeitstage für Musik, 1 Berlin 31, Kurfürstendamm 26 a, Germany. This will overlap the Berliner Festwochen, 20.9 till 9.10.1970.

Cologne Courses for New Music, September-December, 1970, Direction, Mauricio Kagel, in collaboration with Westdeutscher Rundfunk, Cologne. The theme will be Music as Radio Play. The facilities of WDR will be used. Part of the course will consist of spontaneous creation and performance of music in public places e.g. railway stations, cinema and theatre foyers, trains and trams, streets at different times of the day, outdoor concerts, sport occasions, lectures, etc. Concert-like performances will be given in hospitals, mental institutions and prisons. Rheinische Musikschule, 5 Cologne-Ehrenfeld(30) Vogelsanger Strasse 28-32, Germany.

OPPORTUNITIES

University College Cardiff, Departments of Physics and Music. A technician is required to assist with an inter-disciplinary Music/Physics project. Applications must reach the Registrar not later than 31 August, 1970. Write for details to Registrar, University College, P.O. Box 78, Cardiff. The work involves computer sound synthesis and control.

Verlag W. Girardet, Essen, is interested in using computer graphics to advertise their journal *Elektronik-Anzeiger*. If you wish to supply drawings, contact Mr. W. Sicking, at Girardetstrasse 2-36, Essen, Germany.

Extract from the National Science Annual Report, 1969, page 95. A grant will enable William H. Huggins of John Hopkins University to conduct research in computer graphic symbols. John L. Clough, Oberlin College, will work on the synthesis of sound by computer. David L. Bonsteel, University of Washington, will do research on the development of techniques for simulating visual experiences in architectural space using computer graphics.

The following participated in the Kansas Conference on Computer Technologies in the Humanities, September, 1969.

Extract from ACLS Newsletter, November, 1969. Vol. XX No. 6. American Council of Learned Societies, 345 East 46th Street, New York, N.Y. 10017, U.S.A.

Franz L. Alt, American Institute of Physics, New York; Richard Bailey, English, University of Michigan; Jeff Bangert, Research and Development, Computer Center, University of Kansas; Robert Barton, Computer Science, Pittsburgh; Donald Bitzer, Plato Project, Electrical Engineering, University of Illinois; Jean-Marie P. Boutquin, Humanities Computing Development, Purdue University; Ned A. Bowman, Speech and Theatre Arts, University of Pittsburgh; John M. Buchanan, History, Cypress, California; Russell W. Burris, Center for Research in Human Learning, University of Minnesota; Frank T. Cloak, Anthropology, Brandeis University; Charles Csuri, Art, Ohio State University; Arlan R. DeKock, Psychology, University of Missouri, Rolla, Missouri; Raymond F. Erickson, Music, Yale University; Laura Gould, Computation Center, University of California at Berkeley; W. B. Helgeson, General Electric Company, University of Utah; Stefan Bauer-Mengelberg, School of Performing Arts, University of Southern California; Ralph L. Bisco, History, University of Schenectady, New York; Robert Hodges III, Control Data Corporation, Minneapolis, Minnesota; Allan S. Jackson, Theater, State University of New York at Binghamton; Charles Kahn, Architecture, University of Kansas; William P. Kent, Systems Development Corporation, Falls Church, Virginia; Jaime Litvak-King, Seccion de Antropologia, Universidad de Mexico; Edward A. Kline, English, University of Notre Dame; Carl Leban, Oriental Languages, University of Kansas; Harry Lincoln, Music, State University of New York at Binghamton; Fred Litto, Drama, University of Kansas; R. L. Muller, Education, Hampshire College; Jeffrey Raskin, Visual Arts, University of California, San Diego; Carter Revard, English, Washington University; Thomas M. Robinson, Philosophy, University of Toronto; Judith Rowe, Office for Survey Research, Princeton University; Lewis Sawin, Dean of the Arts College, University of Colorado; William Schoene, Computer Aided Instruction, Systems Development Corporation; Sally Sedelow, Information Science, University of North Carolina; Walter Sedelow, Dean of the School of Library Science, University of North Carolina; Gilbert Shapiro, Sociology, University of Pittsburgh; Georgette Silva, Institute of Library Research, University of California at Los Angeles; John B. Smith, Computer and Information Science, University of North Carolina; Donald Squires, Marine Sciences Research Center, State University of New York at Stony Brook; Elden Tefft, Design, University of Kansas; Larry Travis, Computer Science, University of Wisconsin; T. W. Ziehe, Tracor Computing Corporation, Austin, Texas.

COMPUTER ARTS SOCIETY ANNOUNCEMENTS

The following meetings for members and guests will take place at the British Computer Society, 29, Portland Place, London, W.1.

7.30 pm. Wednesday 14 October, 1970. Gareth Jones: It's About Words (Provisional Title).

7.30 pm. Wednesday 4 November, 1970. John Latham: Artists Placement Group.

7.30 pm. Wednesday 2 December, 1970. Stroud Cornock and Ernest Edmonds: Progress at Leicester in the Development of Software Packages for Artists by the Combined Study Group.

THE COMMITTEE of the Computer Arts Society meets at 7 pm. on the first Friday of each month in the office of John Lansdown, 4th floor, 50/51 Russell Square, London W.C.1. Any member of the Society may attend these meetings.

At the beginning of September Mike Thompson and his family are emigrating to Israel. In addition to his own creative work and study of modular painting, Mike has played a major part in gathering the Society's collection of slides. At 6 pm. on Saturday 29 August, Mike's friends are meeting at the ICA, Nash House foyer, for a short drill parade in the Mall, and a viewing of Bunuel's *Belle de Jour* at 6.30. (Tickets, 7s.) There should be enough members of the ICA and other qualifying organisations to assure those who are not, of guest status.

MISSING MEMBERS. Barry Peters, lately of London, has disappeared again. Mail for Stan Vanderbeek has been returned from Cambridge, Mass. Information to A.S. please.

CHANGE OF ADDRESS. Edward Zajec has left America and is now at Via S. Michele 37, Trieste 34124, Italia.

It's a shame that in a society like ours, based on information and communication, there is such slight contact among members. One proposal discussed at the last Committee meeting is to hold an annual general meeting, followed by some social activity. In the meantime, members might take up this suggestion. A full membership list exists, indicating the range of interests of members. Anyone wishing to meet others with the view of starting a project, for discussions, or other activities, can contact K. R. Burman, 40 Crown Lane, Southgate, London, N.14. Telephone: home, 01-361 9921, work, 01-734 9097 ext. 12. Mr. Burman, who frequently attends Committee meetings, will act as a link in arranging such projects.

PAGE

Please send more information about activities relating to computer applications in the arts to the Editor. So much is happening worldwide, but we hear about only a tiny fraction of the action.

CORRECTION. In PAGE 8 the name of the Centre directed by Marcello Salvadori was given incorrectly. The correct title is Centre for the Studies of Science in Art, 31, Willoughby Road, London, N.W.3. Tel. 01-435 4166.

Owing to last-minute difficulties with the printing equipment, the artwork for PAGE 8 was reduced in the process of reproduction. This explains the excessively large margins, and the fact that the illustration on the front was not printed in actual scale. The size of the original print is 7½ by 9½ inches.

The greatest difficulty in producing PAGE lies in the typing of the bulletin. We are now trying to locate an IBM golfball typewriter on which the bulletin could be typed. We only require access to this machine one day every six weeks - could be on a weekend. If you can help with this, please write to the Editor.

BACKGROUND TO COMPUTER ART. No. 3. This poem was printed in the magazine *VESCH/GEGENSTAND/OBJET*, No. 3, page 5. The magazine was edited by the Russian writer Ilja Ehrenburg and El Lissitzky in Berlin. The first number came out in April 1922, and only three numbers were produced. The magazine is illustrated, and the text is in Russian, German and French. Camilla Gray (*The Great Experiment. Russian Art 1863-1922*, London, 1962, page 254) says that the publication '...brought together those parallel ideas which had arisen independently all over Europe. This was the first post-war, multi-lingual, international magazine of the visual arts to unite the ideas and personalities which created the international functional school of design'.

Mayakovsky, 1893-1930, was one of the chief figures in Russian Futurism. He first visited Berlin in October 1922, just before his visit to Paris where he met leading artists and composers. El Lissitzky, 1890-1941, is one of the most influential figures in typography in this century. He collaborated with Mayakovsky on a number of projects.

COMPUTER ARTS SOCIETY, AIMS AND MEMBERSHIP

The aims of the Society are to encourage the creative use of computers in the arts and allow the exchange of information in this area.

Membership is open to all at £1 or \$3 per year; students half price. Members receive PAGE and reduced prices for Computer Arts Society public meetings and events. The Society has the status of a specialist group of the British Computer Society, but membership of the two societies is independent.

Libraries and institutions can subscribe to PAGE for £1 or \$3 per year. Extra copies will be sent to the same address at half price. No other membership rights are conferred and there is no form of membership for organisations or groups. Re membership, subscription, circulation and information; write to Alan Sutcliffe.

COMPUTER ARTS SOCIETY ADDRESSES

Chairman Alan Sutcliffe, ICL, Brandon House, Broadway, Bracknell, Berkshire. Secretary John Lansdown, 50/51 Russell Square, London W.C.1. Editor of PAGE Gustav Metzger, BM/Box 151, London W.C.1.

Comments on Computer-Generated Motion Graphics.

John Whitney.

At many places around the world, the computer is being seriously studied as an entirely new kind of musical instrument. And now the art of music, strictly for listening, may itself be undergoing some extraordinary changes as musical experience expands into the dimensions of the visual realm. Not long ago the movies acquired a sound-track; now music may get its "picture-track," as is already the case, in a primitive form, in the "light" shows.

A visual art complementary to music, independent of but similar to music, is certainly coming in the near future, thanks to computer graphic capabilities that are evolving.

The computer, as a drawing tool, offers some very special advantages if you want to compose visual motion as I do. However, motion, as a fundamental attribute of any graphic art, is altogether unprecedented.

I am speaking of a visual art whose primary quality, like music, must be movement through form; formal action, with colour, that evolves, changes and develops in time. Until recently we could not realize this visual art, although it has been within the scope of human imagination for hundreds of years, because we have not had instrumentation comparable in any way to the whole body of classical musical instruments. We have not had even the environment in which this art might exist until cinema and electron-graphics were developed.

The computer, of course, is a relatively costly and sophisticated instrument. As a tool for this visual art, it is also clumsy, and I suppose, primitive compared to instruments that will evolve in the coming years. Yet the essential drawing capability is there. With precision and detail it can produce thousands of images, each one with the most subtle incremental variation. This power of the computer to produce endless variations upon pattern is basic to the production of motion.

Some people can't bear the thought of computers invading the domain of art in any fashion as tools or what you will. From their point of view computers are an invasion -- as if these machines had the power somehow to intrude themselves upon us, or use us, instead of the other way around. There are others who seem to want to be used by the computer. They will propose that we turn one on expecting that some new kind of art will just flow forth ready made. It is easy to understand why these people wish to enjoy the illusion that a computer has a "useful" mind of its own, with science fiction as popular as it is. Yet tools have not often been personified this way in the past. No one ever proposed that we turn on a steam shovel "to see what kind of a hole it will dig." No one living, that I know, ever turned a car loose, full throttle, in gear, and asked, "Let's see where it will take us."

There is the tradition of tools to implement the muscles, like the steam shovel, and the senses, as with the telescope. But tools to implement rational and creative processes are recent, and they do raise questions, even questions of philosophy, that have yet to be more broadly explored or explained.

Yet I, for one, do not find that these questions seriously get in the way of my work. I might even wish at times that I could turn the computer loose to "follow its own mind" and see what it would draw. But my disposition, as well as computer capability, will not permit this. I have found, from considerable experience, that a computer graphic system, set in motion this way, is hardly more productive than mechanical systems or oscilloscopes that I have used in the past. There is a mid-course which one must carefully search out which offers some degree of balance between tedious planning and unplanned surprise and discovery.

At any rate my computer will not play by itself. I am obliged to approach my work with much the same constraint and respect and studious mind as others study the piano.

Musically, to move from low to high C is to move upward. There are implicit spatial dimensions associated with the experience of music which are believed to have much to do with its universal appeal. This spatial framework, so to speak, is outside the real world: a kind of experience in space which is spoon-fed to us, as we hear music, in orderly patterns of time through rhythm and meter. It has been suggested that we enjoy a kind of vicarious frolic in this space of the mind's eye, as if we were literally swimming or flying in it when we hear music.

I aspire to cause something else to move in that spatial world where only musical tones have moved in the past. Admittedly, it is an inaccuracy to claim that only musical tones have occupied that space. In fact the space I refer to is the space that surrounds sculpture or the space depicted in much painting. Yet no visual object has truly moved in that space. Indeed no physical object could possibly move therein.

Only that mysteriously "nonphysical" visual object, the image of light on the motion picture screen or the cathode-ray tube, has the potential to really move in that space.

Abstract painters might share my aspiration to deal creatively in that space. But the painter cannot. A painting is but a "still frame" from the kind of moving picture I have in mind. The artists cannot effectively control the time, nor the order, nor the conduct of the movement he does elicit. There has been no way to exercise such controls of motion in the way composers have been able to control musical action for centuries.

I look upon my work in this field as but one man's contribution among many that must be made toward the day of a new art in the world. I continue to feel the need to share knowledge of these elementary efforts with others who may be of a similar mind. And I speak urgently of the need for the establishment of centers of study toward this goal.

This text was presented at lectures in Munich, Dusseldorf, Hamburg, Spring, 1969. This is its first appearance in print. John Whitney is quite simply the biggest name in computer films. Members of the Society were delighted to meet him and his wife when they dropped in at the June Committee meeting in London. We screened computer films including his latest short black and white film now showing in the American Pavillion, Osaka. Whitney takes up the post of Professor at Cal Tech this autumn. J.W. California Institute of Technology, Pasadena, California, 91109, U.S.A.

MODULES IN MADRID

It was not until I visited the Arab restaurant in Madrid that I realised we have had modular decorations for several thousand years. Tiles are an ancient art, and it now seems natural that the largest and liveliest group of artists using computers for modular painting and other applications is in Spain.

It would not be proper for me, as one of the guests, to write a review of the seminar Generacion Automatica de Formas Plasticas, but it is right for me to thank those who organised it in the Computer Centre of Madrid University. Generosity is their only fault - after a lunch finishing at 5 and a mountainous dinner of seafood I had two days on camomile tea.

Now for the review. That Madrid is such a centre of creative computing is due to the committed interest, involvement rather, of the three people who run the computing centre, Mario Barbera of IBM, Ernesto Camarero the sub-director, and F. Briones. In the cool spacious basement of the centre they had arranged an exhibition, dominated for me by the modular works of Barbadillo. I liked best the participation-inviting cut-outs of Gerardo Delgado which have a characteristically Spanish rich clarity. Four differently coloured square sheets of card cut to the same computed shape are held in a simple frame and may be arranged in any of almost a hundred thousand possible ways.

Alexanco showed a field of three-dimensional plastic forms, all transformations of a basically humanoid figure. There was fun, too, from Lugan, a Spanish Bruce Lacey, with an adapted, reacting tape deck.

Listening to these artists talking about their work in the evening sessions of the seminar, but unable to understand the details, I fell to thinking how their diagrams and numbers, arrows and schemes were reminiscent of the musical procedures of serialism 10 years ago. I am not saying that this art is 10 years behind that music, but simply that there is a parallel. Nor were the old questions missing - is it music? is it art? This time from a persistent professor of aesthetics, who seemed to accept procedural art when he found it was practised in Britain and America, but had not taken the brilliant Spanish work before him as proof of its value.

Herbert Franke, another guest, pointed out some likely implications:

the unique value of an original is called in question,
manual fabrication by the artist is no longer a necessary condition for artistic value,
the artist loses his mystic pre-eminence,
the science of art and artistic criticism use understandable terms.

Alan Sutcliffe

CAS...CASH...CASUS...CASCA... CAS ... CASH ... CASUS ... CASCA ... CASFRA ... CASIT/GOT IT ?