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     Craig Harris, Executive Editor
     Roger Malina, Editor

     Editorial Advisory Board
         Roy Ascott
         Michael Naimark
         Simon Penny

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OBITUARY
< Lejaren Hiller >

JOB OPPORTUNITIES
< Arts Wire Network Coordinator >
< News Director for Arts Wire >
< Kinetic Communication Designer - Carnegie Mellon >

LEA FORMAT CONVENTIONS
LEA FTP ACCESS
LEA SUBMISSION GUIDELINES & PAST ISSUES ON
TECHINFO.MIT.EDU
LEA PUBLISHING & SUBSCRIPTION INFORMATION
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            |   INTRODUCTION    |
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< This Issue >
This issue contains abstracts describing Christian Huebler
and Yvonne Wilhelm's Knowbotics work, and Jean-Francois
Colonna's perspective on dynamic systems, numerical
reality, and the reliability of computers. Lisa Kirt
reports on the museums from New York, Paris, Chicago, New
Jersey and San Francisco that were chosen for the first
round of awards in the AT&T: New Experiments in Art &
Technology project. Laurie Lundquist, one of the
participants in the project, is writing an article about
her project "The Lagoon Restoration Project" for the hard
copy journal Leonardo.

Some of the dates about upcoming events and calls for
papers or art work are imminent. This year the ACM
International Conference on Multimedia is being held
independently of SIGGRAPH's event, and Co-Chair Meera
Blattner has informed me about a very recent decision to
develop an arts track and performance venue. The deadline
is March 10, though she is trying to get it extended.

I regret to report that computer music pioneer Lejaren
Hiller has died. Andrew Stiller provides a brief obituary
about an important early figure in the field.

I encourage LEA readers to submit material for publication
in Leonardo Electronic Almanac. Keep in mind that in
addition to appearing here in serial fashion,
Leonardo/ISAST publishes a hard copy Leonardo Almanac
comprised partly from material collected as part of this
project. There is also discussion about possible CD-ROM
compilations. Use this forum to get the word out about
your work!

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< Letters to the editor >
I thank all of you who responded to the survey posted in
January's issue of Leonardo Electronic Almanac (LEA 2-1).
This information is important for determining the most
effective development approach for Leonardo Electronic
Almanac. I am still interested in hearing from more of the
readers, so please keep the surveys coming. Scott Wood
addressed a variety of relevant issues and has some
pointers in his comments, so I am posting them here.

LEA Subscriber: Scott Wood
Email Address: sw@mda.ca
scott wood sw@mda.ca
MacDonald Dettwiler
Richmond BC, Canada

What ftp and gopher sites do you peruse for current
information?
For my work-related stuff, I maintain my own HTML document
pointing to useful ftp/gopher/telnet/http sites and it
currently has over 50 sites. Most of these are Space
Agencies in various countries, or other government sites
which contain information related to the area of Remote
Sensing of the Earth. For other "personal interest" type
of stuff, I probably have another 20 or so sites. Some of
the sites include:

NASA, US Geological Survey, Canada Centre for Remote
Sensing, European Space Agency, NOAA, National Space
Development Agency of Japan, WELLgopher, Canadian
Broadcasting Corporation, FineArt Forum, Wired, Electronic
Newsstand. etc.

Comments
(First of all, just a technical quibble: Mosaic is not the
only Web server available. So perhaps under "Resource
Access" above, there should have been an entry for WWW
rather than Mosaic.)

[Ed: Point well taken, Scott. Thanks for clarifying that.]

My current preference for the LEA would be an HTML
document (that is, a WWW hypertext document). I've been
using Mosaic for a while now, and I think it is going to
become very wide-spread. However, I can see the problem of
dealing with a variety of people who have a variety of
resources.

Introducing the type of formatting that you did in this
issue of LEA makes it possible for a "conversion" program
to automatically generate a WEB hypertext document out of
the text file. (In fact I've already written a simple one
in the AWK language). Ohio State university has done
something similar with the Frequently Asked Questions
(FAQ) postings on the Usenet groups. They have developed
conversion programs which take the text versions of the
FAQ and produce a Web document. One thing that they try to
do is to recognize when an FTP/Gopher/HTTP site is
mentioned in the text and automatically convert it into a
hypertext link to the appropriate document. For example,
in the current issue of LEA there was mention of the Wired
FTP site. If the mention of that site in the text file
followed a regular format, a conversion program could put
in the appropriate link. I don't know if the programs from
Ohio state are available or not. They might be a good
group to contact about issues in converting text to
hypertext.

My support for audio files is currently not too good: I
work on an X terminal and it has no sound. However a
number of machines around here have sound, including SGI's

and Sun's. They seem to generally support the Sun audio
format (.au files). However, given the amount of data that
good quality digital audio takes up (and the length of
time it takes to transfer that data) I'm not sure of the
usefulness of having audio data at this point. How many of
us have fast enough network connections to make it
reasonable? While surfing the net using Mosaic, I've
noticed that a lot of sites put a lot of images in their
documents. They don't seem to give any thought into the
fact that, depending on the user's site, it could take a
long time to download the images. And then, what is really
annoying, is finding out that the image is just a picture
of the author's pet cat (or some other trivial thing)
which adds very little substance to the document. If LEA
goes hypertext/multimedia, I would recommend adopting some
way of informing the user of the size of an audio
file/picture before they start fetching it, so that they
can decide whether or not to fetch it based on their
network connection.

Anyway, you might be interested in a trial that the
Canadian Broadcasting Corporation (CBC) is conducting.
They are making digital audio files available, through the
Web, of a number of their radio programs. They claim that
this is the "first ever presence on the Internet by a
national broadcaster". They provide audio in the 'au'
format, and they have a hypertext link to a "tools" area
of tools that can do audio conversions. If you are
interested, check out
http://debra.dgbt.doc.ca/cbc/cbc.html using a Web browser.
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            |   FEATURE ARTICLES   |
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< Dialogue With The Knowbotic South >
Christian Huebler
Yvonne Wilhelm
Email: kr+cf@khm.Uni-Koeln.DE

Developer Kit
o The model of a process of confronting with the public
appearance of scientifically collected and processed data
series, mock-ups and simulations as representations of a
conceptionable reality
o Strategies for a dialogue with a changing view of
nature based on the information sets provided by current
Antarctic research

Technotop
A recorded series of measured values represent natural
conditions in the form of digitally coded data structures.
For the purpose of these transformation processes,
Antarctica is surveyed (in the deep sea as in the orbit,
in its pack ice as in volcanic craters) by a formidable
array of automatic measuring instruments which, installed
and maintained by scientists, observe and record natural
phenomena as an extension of perceptual organs. These
measuring instruments divide the entirety of nature into
processable information units. Their sensory capacities
are highly specialized and focused on individual phenomena

which are additionally broken down into space and time
fragments to generate information output. As a result,
this fractalization of nature can only take into account
the technologically perceptible structures of the
Antarctic reference nature.

Exterritorialized Nature
The large volumes of acquired and corrected data
representing Antarctica in our data bases are freely
accessible via electronic networks, even to non-scientific
users. The result is a digitized telepresence of reference
nature in a public data world.

Reconstructed Nature
Natural scientists transform exterritorialized nature into
models, formulating functional mathematical equations to
reflect system effects as the might take place in the
reference nature. These models are tested by simulation.
Measured digital values fill the variables in these
equations and are thus reorganized in a processual context
of effect. Simulation provides a means of reconstructing
natural processes which, in the exemplary case of
Antarctica, mainly take place on an infinitely small or
infinitely large scale, in inconceivable depths and
complexities. These mathematically interpreted, invisible
processes can be projected into the future to generate
predictions that allow us to judge the effects of
parameter manipulations. Nature becomes a concept.

Computer Aided Nature
The current scientific dialogue relies increasingly on
this reconstructed form of nature. Answers are no longer
supplied by reference nature via the experiment, but by
the medium, i.e. the computer. At the same time, the
dialogue is popularized in the sense that the
'Computertop', i.e. exterritorialized nature in all its
digitally stored forms (data series, models, simulations),
becomes generally accessible through public data networks.
The circle of participants in the dialogue widens.
Reconstructed nature detaches itself from its
technological synthe-sizing process. It becomes in
distance to its reference basis emancipated and assumes
the role of an autonomous partner in the dialogue,
emerging as Computer Aided Nature (CAN).

KR+cF
The idea is to create a Public Knowledge Space in which a
potential dialogue about a potential nature can take
place. KR+cF devises an infrastructure for this
hypothetical space and outlines plans for the development
of processual objects. These 'agents' expose the
confrontation with the dynamic complexities of
reconstructed nature and attach it to a discourse on a
potential Computer Aided Nature.

Knowbots
Knowbots embody the strategies which generate this
dialogue on a hypothetical nature. System effects
reconstructed in scientific simulations assimilated with
continuously updated data series serve as input to the
operations of the Knowbots. KR+cF combines strategies from
the open field of Antarctic research interests to these

operations, which are intended to coordinate a
continuously re-calculated nature with its potential
perceptibility and effectiveness. In this way, knowbots
become the immaterial generators of differences and gaps
in advanced system effects of a Computer Aided Nature.

Public Knowledge Space
An extension of the dialogue is achieved not through a
recipe for a virtual nature (i.e. its mere perceptually
illusive construction), but through the interaction with
knowbots in aesthetic fields of the Public Knowledge
Space. These fields are generated by the tension between
the inadequacy of traditional concepts of nature in the
face of technological and cultural developments on the one
hand and the abstract conceivability of a Computer Aided
Nature on the other. The result is a confrontation between
the experiences of our historical (physical) presence in
nature and the (spiritual) freedom prevailing in the
Public Knowledge Space. The detachment from the reference
nature is precondition for the emergence of these specific
aesthetic fields. The knowbots outlined by KR+cF represent
no static formalization. They can be modified as they
interact with the participants present in the Public
Knowledge Space. Knowbots are mobile in time and space and
become multi-local and -present through copying in
networks. Processes inside the knowbot can be linked to
externally located contextual interests. The Public
Knowledge Space thus creates a playground for modifying
the possibilities (and hence, the formalizations and
dynamics) of knowbots as part of an interdisciplinary
discourse with a hypothetical nature.

Chimera CAN
The advanced Computer Aided Nature recombines natural
system correlations with specific social, cultural and
aesthetic components. This chimerical nature, unlike
hermetically sealed virtual worlds, owe its existence to
its linked effectiveness to the reality and is subject to
the same cultural conditioning as our perception of the
so-called reference nature. It is open to economic
exploitation and political power play, operates as a
knowledge-generating source, offers the potential for
aesthetic experience, and can itself become the object of
scientific research. Using current approaches in Antarctic
research as its material, KR+cF thus devises a visionary
interaction between the actual, the virtual and the
hypothetical.
****
< The Numerical Relativity >

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Is a computer an error free machine to be trusted? Most
people give a positive answer to this question; but what

is the actual situation? On the one hand, a computer is a
man manufactured machine of a very high complexity, and
thus every design flaw can be the cause of a wrong result
(a numerical value or anything else a computer can do or
produce...). On the other hand, one of its components can
fail: a hard failure generally gets the system down, but
what is happened if a cosmic ray (or something like
that...) hits a machine? It can give a 0 instead of a 1
during an elementary operation and then again a wrong
answer. Assuming we have a computer that includes
redundancy and is well protected : can it be really an
error free machine? Fortunately, in most cases (even
whiteout being deeply buried under kilometers of rocks),
the answer is yes (otherwise it would be safer to stay
home : no more car driving or airplane flying...). But
unfortunately we can devise situations (most are
scientific ones) where the answer is no.

When studying dynamic systems, the well known Edward
Lorenz's notion of the sensitivity to initial conditions
should be extended and given the more general name
sensitivity to the accuracy of numerical values. As a
matter of fact, the internal accuracy of computers is
limited. During each arithmetic computation
(multiplication is the worst case), digits are lost; this
implies that the results obtained will therefore depend on
the order of the operations, and the usual associative
mathematical property of multiplication, for example, will
no longer exist.

The way in which a computer program is written
(particularly with regard to parentheses) and the
compiler used (and its optimization options) will play an
important role in the value of the results obtained.
Moreover, not all computers (let's recall they are made of
hardware and above all of software) represent and handle
digits in the same way. In these circumstances, two
strictly identical calculations carried out on two
different machines can give different results, which in
the case of a dynamic system may vary increasingly in
exponential terms, where forecasts relating to the
development of the state of the system being studied
depend largely on the computing tool! Is it therefore
necessary to introduce the notion of computer subjectivity
or the one of numerical relativity?

This phenomenon may be observed by studying the Verhulst
dynamics. It models the variation of a population of
individuals by the following iteration (starting with a
given X0):

$$X_{n+1} = (R+1).X_n - R.X_n^2$$

('R' denotes the growing rate).

The above iteration in fact shows five families of
formulation (as far as numerical results are concerned,
any other possible form gives the same result as one of
these five forms). As the following tables indicate,
these five formulations, obtained under the same
conditions (a very elementary C program in double

precision, where X0=0.5 and R = 3.0, on IBM ES9000 and
IBM RS6000 machines) give five sets of results which are
totally incompatible, after a very small number of
iterations (n=60):

                    IBM ES9000 :

```
(R+1)*Xn - R*(Xn*Xn)   ==>  1.040381
(R+1)*Xn - (R*Xn)*Xn   ==>  0.846041
((R+1) - R*Xn)*Xn      ==>  0.529794
R*Xn + (1 - R*Xn)*Xn   ==>  1.319900
Xn + R*(Xn - Xn*Xn)    ==>  1.214070
```

                    IBM RS6000 :

```
(R+1)*Xn - R*(Xn*Xn)   ==>  0.001145
(R+1)*Xn - (R*Xn)*Xn   ==>  0.271115
((R+1) - R*Xn)*Xn      ==>  0.616781
R*Xn + (1 - R*Xn)*Xn   ==>  0.298613
Xn + R*(Xn - Xn*Xn)    ==>  1.307350
```

It is highly probable that dynamic systems which are much
more complex than the one used for demonstration
purposes, in particular the models used for long-term
weather forecasting (whose sensitivity to initial
conditions is well known), depend on the computers and
program syntax which enable them to be studied! It is
therefore essential to detect this behavior and be aware
of the "limits" of such models (during studies of the
paleo-climatology, the greenhouse effect, or even the
nuclear winter).
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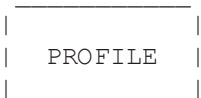
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                     | PROFILE |
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< AT&T: New Experiments in Art & Technology >

Lisa Kirt, Project Director
Email: lisakirt@attmail.com

For further information contact:
Ben Hartley/Susan Clarke
Arts & Communications Counselors
Tel: 212 715-1551/715-1546

AT&T ANNOUNCES SELECTION OF SIX SCIENCE & CHILDREN'S
MUSEUMS AS PART OF THE FIRST "AT&T: NEW EXPERIMENTS IN
ART & TECHNOLOGY" PROGRAM

Move your shadow to make music. Use your hands and feet
to power a thunderstorm. These are just two of the art
installations at six science and children's museums
selected to participate in AT&T: New Experiments in Art &
Technology. The $300,000 initiative, announced today,
enables museums to commission professional artists to
create works of art which use science or technology as a
creative medium for temporary and permanent exhibition.

"We at AT&T are pleased to announce this initiative. It
celebrates the creative process in both art and science,"
said Reynold Levy, President of the AT&T Foundation.

"Further, it sparks curiosity about science and technology, encouraging kids and their families to make the same kinds of intuitive leaps that artists and scientists do. AT&T: New Experiments in Art & Technology promises to give artistic life to science and children's museum spaces that will delight, astound and thrill," Levy continued.

AT&T assembled an advisory committee of artists, educators and museum professionals who reviewed the AT&T: New Experiments in Art & Technology proposals and assisted in the selection of projects. The committee included: Dr. Jan Hawkins, Director of the Center for Children and Technology; Chuck Hoberman, artist and President of Hoberman Associates, Inc.; David Hupert, Principal of David Hupert Associates, a museum planning advisory service; Cynthia Panucci, artist and Artistic Director of Art & Science Collaborations, Inc.; and Jeffrey Ramirez, Deputy Director for Programs at the Bronx Museum of Arts. Submissions included visual arts, music, theater, interactive computer programs, virtual reality and video. The panel made recommendations based on artistic merit and educational value.

AT&T has a long history of supporting science education. Over the last ten years alone, AT&T has provided over $100 million to science education programs and projects as diverse as PBS MATHLINE, aiding in the development of instructional videos showing middle school teachers how to employ new national math standards; AT&T TEACHERS & TECHNOLOGY INSTITUTE, a program which brings math and science teachers to AT&T Bell Laboratories and other AT&T facilities for two-week summer institutes to explore new technologies and their impact on the world of math and science education; and the INTERNATIONAL PHYSICS OLYMPIAD for high school students. AT&T also produces "LIVE FROM AT&T BELL LABORATORIES," an hour-long television show broadcast live to students in the United States, France and Germany. The show explores math and science with AT&T scientists and engineers. AT&T has also been an active supporter of higher education with programs such as its UNIVERSITY EQUIPMENT DONATION PROGRAM, which provides networked- computing equipment to selected colleges and universities for teaching and research. Since this program was established in 1984 it has resulted in contributions in excess of $287 million.

The AT&T: New Experiments in Art & Technology initiative continues AT&T's longstanding commitment to innovation in the arts. Art and technology projects that AT&T has actively been involved with range from the 1960's project Experiments in Art and Technology (EAT), co-founded by AT&T Bell Laboratories scientist Billy Kluver and artist Robert Rauschenberg, to the multi- media exhibition "Rolywholyover A Circus" by composer and visual artist John Cage, which opened at The Museum of Contemporary Art, Los Angeles (MOCA) on September 12, 1993 and will continue at the Guggenheim Museum, New York, from April 29 through August 13, 1994.

Other art and technology partnerships sponsored by AT&T include: "I Believe it is an Image," by video artist

Gary Hill, organized by the Watari Museum of Contemporary
Art, Tokyo; an exhibition of multi-media artist Nam June
Paik's works, also organized by the Watari Museum;
"Robert Longo," organized by the Los Angeles County
Museum of Art; "Passage de L'Image," an exhibition of
contemporary photographs, video, film, and multimedia
installations organized by the Centre de Pompidou, Paris;
"Astral Convertible", a dance work by the Trisha Brown
Dance Company which utilized interactive scenery designed
by AT&T Bell Laboratories scientists; and multi-
disciplinary performance works by such artists as
Meredith Monk and Ping Chong.

Over 50 institutions from the United States, France,
Japan, The Netherlands, Puerto Rico, Mexico, Venezuela,
the United Kingdom and Canada were invited to submit
proposals for AT&T: New Experiments in Art & Technology .
The projects selected are designed to encourage playful
experimentation, exploration and discovery in science and
technology, thus enriching the learning experience of
children, particularly in the 8- to 12-year-old age group.

The following is a description of the selected
institutions, people and projects.

New York Hall of Science
Flushing Meadows
Corona Park, NY

Ron Kuivila's "Singing Shadows"
March 1994
On March 26, the first AT&T: New Experiments in Art &
Technology project "Singing Shadows" opens at the New
York Hall of Science. Composer Ron Kuivila has designed
"Singing Shadows" as a permanent installation in the New
York Hall of Science's new audio technology exhibition
area. "Singing Shadows" encourages interactive
exploration of music synthesis, the process that
electronically creates and controls the production of
musical instrumentation. A computer reads the movement
of visitors' shadows which are reflected on light panels
and translates them into a wide variety of sounds. The
project encourages visitor participation and promotes
curiosity and inquiry into the phenomenon and uses of
synthesized sound.

Liberty Science Center
Jersey City, NJ

"Technolab: Artists in Residence Project"
Participants include Paul DeMarinis, Arthur Ganson, Bernie
Lubell, and Tim Watkins.
September 1994 - June 1995
AT&T will support the involvement of Arthur Ganson, Paul
DeMarinis, Bernie Lubell and Tim Watkins in the inaugural
year of "Technolab: Artist-in-Residence" program at the
Liberty Science Center (LSC). Technolab is a hands-on
program designed to foster interaction between museum
guests and artists who will create works based on themes
explored by LSC's Environment, Health and Invention
galleries. The first year of Technolab (1994-1995) will
feature three two-month displays of kinetic sculptures.

Sculptor Arthur Ganson's "Gear Tower" will begin the series in the Fall of 1995 with the construction of a 15-foot, motorized cardboard gear tower. Students will be invited to participate as Ganson cuts gears and tests ratios. In the winter of 1994-1995, Paul DeMarinis and Bernie Lubell will collaborate on "Dry Rain Peddling," which utilizes a hand- driven thunderstorm machine and a bicycle powered rain machine to demonstrate chaos principle of physics in everyday life. Tim Watkins' solar and wind powered "Sun Babies" will be installed on the museum grounds in the spring of 1995. Utilizing over 40 mechanical units resembling marsh grass, the installation will react to its surroundings with a range of sounds triggered by the wind or sun.

Staten Island Children's Museum
Staten Island, NY)

"Sculptural Encounters with Three Dimensions"
Participants include Helene Brandt, Robert Chambers, Elizabeth Egbert, Jesse Moore, Cynthia Panucci and Tim Watkins.
December 1994
With the support of AT&T, the Staten Island Children's Museum will commission six sculptors for "Sculptural Encounters with Three Dimensions" an exhibition which explores three major areas of scientific interest to sculptors: geometry and volume; perception of scale, pattern and material; and the use of sound, motion and light. The artists who will work in pairs are: Elizabeth Egbert and Helene Brandt; Jesse Moore and Cynthia Pannucci; and Tim Watkins and Robert Chambers. Each pair of artists will create two interactive works.

Chicago Children's Museum
Chicago, IL

"Sonic Invention"
Christine Rojek
March 1995
As part of the opening of the Chicago Children's Museum's new home in the historic Head House at Chicago's Navy Pier, AT&T is funding the museum's commission of artist Christine Rojek's "Sonic Invention," a permanent interactive musical sculpture to be installed in the building's 40-foot water tower. "Sonic Invention" will utilize familiar technologies offering visitors the opportunity to investigate the properties of resonance, amplitude, pitch and tone quality through their interaction with the sculpture.

Cite des Sciences et de L'Industrie
Paris, FRANCE

"Lumiere fantastique" and "Sculpture de lumiere"
Piero Foglati
Date To Be Announced
Cite des Sciences will commission two pieces by Italian artist Piero Foglati: "Lumiere fantastique" and "Sculpture de Lumiere." Based on light and kinetics, these sculptures challenge the visitor to explore visual illusions, perceptions of light and the composition and

decomposition of white light. For "Lumiere fantastique,"
Foglati sends a horizontal beam of white light from a
projector onto a white vertical disk. When the disk
begins to spin the white light breaks down and all colors
of the spectrum become visible. For "Sculpture de
Lumiere," visitors enter a dark room to see a moving
Lissajous figure (a three-dimensional curve of light)
appear suspended in space.

The Exploratorium
San Francisco, CA

"Lagoon Restoration Project"
Laurie Lundquist's
Date To Be Announced
AT&T will support the Exploratorium's "Lagoon Restoration
Project," designed by environmental artist Laurie
Lundquist. Lundquist's aim is to create a balanced
ecosystem in the museums's existing freshwater lagoon and
to involve visitors in an exploration of how biological
processes cycle energy through aquatic systems. Water
from the lagoon will be brought into the museum through a
circuit of clear plumbing pipes and basins of living
plants and aquatic animals. Visitors will be able to
compare water as it enters and exits the remedial circuit
through magnifying bubbles placed at strategic points.
The filtered water will then cascade down the surface of
a sculptural wall, returning clean and aerated to the
outdoor lagoon.
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          |   ANNOUNCEMENTS     |
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<   The Re-Invented Image: CYPRES Aix en Provence >

CYPRES
c/o Emmanuelle Vinet
Rue Emile Tavan
13100 Aix en Provence, France
Fax 33-42-27-63-99

March/April 1994
The CYPRES center of transdiciplinary research and the Art
School of Aix en Provence announce an exhibit, workshops
and a colloquium to be held in March and April 1994 on
"The re-invented image" addressing the evolution of
photography, digital photography and issues in ethics,
history of art, philosophy, and the sciences related to
the new imaging technologies.
****
<   Seeking Information on Intellectual Property rights,
    arts education and the new media >
Roger Malina
Email: rmalina@cea.Berkeley.EDU

Leonardo is working with a group organizing:
a) A seminar on the impact of the new media on
intellectual property rights. (legal, commercial, artists
issues)
b) A seminar on arts education within the context of the

new media
c) A resource guide to people, projects, organizations in
the New York Area that are involved in these issues.

The arts are broadly defined to include the visual,
performing and literary arts. Interested colleagues are
invited to send information on people, projects and
organizations in these areas to Roger Malina at
davinci@uclink.berkeley.edu.
****
<   Leonardo Call for Papers: Pioneers, Curators,
Biotechnologists and Others >
Roger Malina
Leonardo/ISAST
672 South Van Ness
San Francisco, CA 94110 USA
Fax 1-415-431-5737
Email: isast@garnet.berkeley.edu)

The journal Leonardo is soliciting articles in the
following categories:

a) Memoirs by artists who have pioneered uses of new media
in the arts before 1970. Texts may be up to 5000 words,
with 8 b/w illustrations and 1 color. Texts should
describe a number of works. The next issue of Leonardo
(Issue 27-1) carries articles:
A Michael Noll, "The Beginnings of computer art in the
United States -A Memoir.
Martin Sperka, The origins of computer graphics in the
Czech and Slovak Republics.

b) Curators of exhibits and group shows of art involving
the use of new technologies and media, or art involved
with contemporary science are invited to contact the
journal about the new Leonardo Gallery Section. Curators
should send information about the exhibit they have
curated. Selected curators will be invited to document the
exhibit in the Leonardo Gallery through publication of an
essay accompanied by illustrations of the work in the
exhibit. Preference will be given to exhibits shown
outside of North America.

c) Artists involved in biotechnology, direct interfaces to
the human nervous system, exploring issues in contemporary
biology are invited to propose texts describing their
work. Issue 27-1 of Leonardo includes "The Anatomy Lesson:
The Body, Technology and Empathy" by Joce Cutler Shaw.

d) Leonardo is starting a new section "Endnote" for essays
and opinion pieces. Topics should be of current interest
to artists involved with new media or contemporary
science. Texts may be up to 500 words long. The first
Leonardo "Endnote" is by Howard Levine on "The art of
mathematics; the mathematics of art" and discusses new
issues arising from the shared use of advanced computer
software by both artists and mathematicians.

Manuscript proposal must be sent electronically to
Leonardo at isast@garnet.berkeley.edu though a text of no
more than 250 words
****

< San Francisco, USA Bay Area Musician's Forum Bulletin
  Board >
Roger F. Malina
Email: rmalina@cea.Berkeley.EDU

The Bay Area Musician's Forum Bulletin Board System (BAMF
BBS) is a single node electronic service dedicated to
connecting San Francisco Bay Area musicians and providing
information of musicians' interests. Founded in December,
1993, by Justin Arey, System Operator, and Mason Wong, Co-
System Operator, the BBS runs on an Apple Macintosh
PowerBook 170, using Telefinder v3.12 BBS software (with
its graphical user interface (GUI) available to Mac users,
and soon PC Windows users), with a built in 14.4K baud
modem and a CD-ROM player (for CD based public domain
software to be available for download).

Musicians from the Bay Area and across the USA dial in to
exchange private email and public discussion messages, as
well as upload and download music related files, from GIF
images of rock stars to lengthy text articles on copyright
law and composition theory. New users are encouraged to
introduce themselves on one discussion section, the "BAMF
BBS New Users," where they can share what instrument they
play, their musical interests and influences. In the
"Musicians Wanted/Available" section, many musicians seek
particular instrumentalists to complete their band
ensemble or advertise their availability for a casual jam.
In the first two months of the BBS's existence, over 160
users have interacted with the board at least once, with
25% of them repeatedly logging on as regular users.

The BAMF BBS is currently a free service, open to all
musicians of all styles and forms of musical involvement.
Give it a call at USA (510) 524-3106, 24 hrs/day, 7
days/wk. For further info contact Mason Wong at
davinci@uclink.berkeley.edu
****
< Surprise Party Online Art/Theory Exhibition >
Steve Mizrach
Email: seeker1@well.sf.ca.us or hbfozz@well.sf.ca.us

THE SURPRISE PARTY
You are invited to participate in the Workshop for the
Invention and Research of Electronic Discourse's first
Surprise Party, March 22-26, 1994 at the University of
Florida, Gainesville. We'll provide the site, the chips
and dip, and the punch. Join us for an informal and
exploratory exchange on the experiments, activities and
adventures of all those investigating the possibilities of
electronic media for:
                creative and theoretical production
                communication/collaboration/research
                invention/activism
                social and cultural criticism
                pedagogy and performance
                self-promotion
                buying and selling/espionage
                spreading nasty rumors/gossiping
                romance
                sorcery....and the list goes on

Your work/play, positioned as it is at the intersection of art, theory, technology and politics holds considerable interest for our project. You would be free to contribute in whatever manner you desired. Come as you are! Bring your own concept!

The potluck format provides a model for organizing a conference in the age of electronic discourse. We do not wish to uncritically and unimaginatively reproduce the structure of the panel discussion , the gallery space, the journal, or passively repeat the authoritative pronouncements of specialists and experts. Let's exploit the in-between, the interstices and crossings of the network!

We need MIDI/emusic/hypersound creations for our exhibit. Please submit!

SUBMISSIONS AND FORMATS
We will be hosting a series of workshops, exhibitions, installations, video and film screenings, discussions, lectures/performances and all night jam sessions at our headquarters at the University of Florida. Participants include:
>   Artist-in-Residence: Nancy Paterson
>   Consultant (Theory/Method): Gregory L. Ulmer
>   Performance/Workshops: Public Domain
>   and a cast of tens of thousands via WWW

Our WWW address will also be open for presentation of images, text, sounds etc. for your perusal. Tune into http://www.clas.ufl.edu/CLAS/ Departments/re-WIRED.html for the latest developments.

We need your text, HTML, MPEG, Quicktime, JPEG, GIF or AIFF files for exhibition on our web server. Plus, we want other kinds of files, such as interactive artspaces, artificial life, hypermedia, animations, MIDI, raytraced images, etc., for display at the exhibition. Please send your files on 3.5" disk to Alan Wright, 302 NE 8th Ave., Gainesville, FL 32601. Small files (<1 MB) can be uuencoded and mailed to SEEKER1@UFCC.UFL.EDU. (Alternatively, you can send TRUE@NERVM.NERDC.UFL.EDU directions for 'get' ftp, so we can 'fetch' it. If your file is really big (>5 MB), send us a Web address, so we can establish remote links to it.) Sorry, but no 'put' FTP is available at this time. We will post more information should direct FTP be possible in the near future. With all files, please include descriptions of the platform (IBM, Mac, workstation, etc.), system, and program (if needed) that the files run on, plus any other requirements (peripherals, cards, etc.) for their proper execution.

Videos (art or otherwise), electronic presentations of theory and criticism, xerographic posters, mail art or other detritus to be exhibited at University of Florida should be sent to Anthony Rue, 1110 NE 5th Place, Gainesville, Fl 32601.

Send your work by March 11, 1994. All submissions should include return postage. For further information and inquiries contact:

```
            hyena@elm.circa.ufl.edu
            true@nervm.nerdc.ufl.edu
**********************************************************
<  THE SECOND ACM INTERNATIONAL CONFERENCE ON MULTIMEDIA  >
October 15-20, 1994
San Francisco, California


      Sponsored by the Association for Computing Machinery
           SIGBIO, SIGBIT, SIGCHI, SIGCOMM, SIGGRAPH,
           SIGIR, SIGLINK, SIGMM, and SIGOIS
                      in cooperation with
          SIGAPP, SIGCAPH, SIGCPR, SIGMOD, SIGOPS, and
              the IEEE Communications Society.


                CALL FOR PARTICIPATION
ACM Multimedia 94 will provide an international forum for
papers, panels, courses, workshops, and exhibits focusing
on the synergies between processing and communicating
information represented in multiple media (multimedia).
Research ideas, emerging technologies, engineering
methodologies, prototype demonstrations, and experiences
should be submitted for review.
```

Technical areas for Multimedia 94 include, but are not
limited to: applications and tools; video information
systems; interactive television; collaboration
environments; database and information systems;
distributed systems; operating system extensions; hardware
and architectures; networking and communication; media
integration and synchronization; image, video and audio
compression techniques; programming paradigms and
environments; storage and I/O architectures; and user
interfaces.

Conference Committee Co-Chair Meera Blattner (University
of California, Davis/Lawrence Livermore) reports on a
decision to have a track for the Electronic Arts on
Wednesday, October 19th, with an evening of electronic
arts also on October 19th. The track would have papers and
panels on the Electronic Arts. Given the extreme late date
of announcement, she is trying to get the March 10th
deadline extended. Contact Meera at blattner@ocfkms.llnl.gov
for more information.

PAPERS:
Technical papers, preferably accompanied by electronic and
videotape software, on completed or in-progress research,
innovative applications, or experience with multimedia
systems are solicited. Where applicable, prototype
demonstrations or videotape presentations are encouraged
to supplement the talks.

Outstanding papers on different areas of multimedia will
be given awards. Selected papers will be forwarded to
ACM/Springer-Verlag Multimedia Systems, the Communications
of the ACM (CACM), or the IEEE/ACM Transactions on
Networking.

Submit six copies of each paper (no more than 15 double-
spaced pages including figures, tables, and references)
to:
        Prof. Domenico Ferrari, Program Chair

```
            Computer Science Division
            EECS Department
            University of California
            Berkeley, CA 94720 USA.
            Voice: +1 510 642 3806
            Fax: +1 510 642 5775
            Email: multimedia94@tenet.berkeley.edu
```

PANELS:
We are soliciting proposals for panels that examine an
innovative, controversial, or otherwise provocative issue
of interest to the field. Panel proposals should include
the issue to be addressed, the members of the panel with a
brief statement of their positions on the issue, and a
description of the panel format. The best panels, in our
experience, have been structured as a debate with an
opportunity for audience participation, but we are open to
other stimulating ideas. Panels consisting of a collection
of short paper presentations are not encouraged. The Panel
chair is willing to work with prospective session chairs
in advance of submission to discuss panel concepts or the
form of a proposal. Panel proposals should be at most 3
pages, and should include a brief description of each
panelist's relevant expertise.

Submit six copies of each panel proposal to:
    Allan Kuchinsky, Panels Co-Chair
    Hewlett-Packard Co.
    1501 Page Mill Rd. M/S 1U-17
    Palo Alto, CA 94304 USA.
    Voice: +1 415 857 7423
    Fax: +1 415 857 8526
    Email: kuchinsk@hpl.hp.com

COURSES:
Proposals (at most 5 pages, including biographical
sketches of instructors) for both 1/2- and 1-day tutorial
courses are solicited. Evaluation of proposals will be
based on expertise and experience of instructors,
relevance of subject matter, and the use of multimedia
technology in the presentation.

Submit six copies of each course proposal to:
    Ephraim Glinert, Courses Chair
    Department of Computer Science and Engineering
    FR-35
    University of Washington
    Seattle, WA 98195 USA.
    Voice: +1 206 543 4305
    Fax: +1 206 543 2969
    Email: glinert@cs.washington.edu

WORKSHOPS:
During the first two days of Multimedia 94, we would like
to hold workshops on specific areas of multimedia research
and technology. Evening sessions during the main
conference (last three days) will be held to report on the
results of the workshops. For more information, contact:
    D. Shepherd, Workshops Chair
    Computer Center
    University of Lancaster
    Lancaster, UK LA1 4YW.

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    Voice: 44-52-459-3827
    Fax: 44-52-484-4011
    Email: doug@comp.lancs.ac.uk
```

EXHIBITS:
ACM Multimedia 94 offers a unique opportunity for vendors
and researchers to exhibit and demonstrate multimedia
products and research prototypes. For more information,
contact:
```
    Prof. Patrick Mantey, Exhibits Chair
    Computer Engineering Department
    Applied Science Building
    University of California
    Santa Cruz, CA 95064 USA.
    Voice: +1 408 459 2158
    Fax: +1 408 459 4829
    Email: mantey@cse.ucsc.edu
```

DEMONSTRATIONS:
As part of ACM Multimedia 94, we plan to hold a refereed
technical and artistic demonstration program. We solicit
working systems that demonstrate the essence of
multimedia: the integration of technologies and media
(e.g., computers, television, facsimile,
communications/networking, databases, user interfaces,
hypermedia, operating systems, virtual reality, data
compression, interface hardware, publishing, etc.).
Submissions (at most 4 pages) should consist of a
description of the exhibit, demo requirements, biography,
and a single VHS video. Electronic submission of the
description is encouraged. Send submissions to:
```
    Tom Little, Demonstrations Chair
    Department of Electrical and Computer Engineering
    Boston University
    44 Cummington Street
    Boston, MA 02215 USA.
    Voice: +1 617 353 9877
    Fax: +1 617 353 6440
    Email: tdcl@spiderman.bu.edu
```

VIDEO:
We are soliciting videos of innovative multimedia
technology. Videotape submissions should be between 5 to
8 minutes, and should be accompanied by a 2 page overview.
We expect to show the Multimedia 94 Video Program in a
special room in the Conference Center during the
conference, and the videotape will be available for
purchase. For more information, contact:
```
    Marc Brown or Dave Redell, Video Co-Chairs
    DEC Systems Research Center
    130 Lytton Ave.
    Palo Alto, CA 94301 USA.
    Voice: +1 415 853 2152 or 2131
    Fax: +1 415 853 2104
    Email: {mhb,redell}@src.dec.com
```

ELECTRONIC PUBLISHING:
The proceedings of Multimedia 94 will be available both on
CD-ROM and via electronic network. Accepted papers will
be expected to be finally provided in several formats
including postscript, and authors are strongly encouraged
to provide about 2 minutes of video and also software and

other relevant information that complements the content of
the paper. For more information, contact:
    Roy Rada, Electronic Publishing Chair
    Department of Computer Science
    University of Liverpool
    Liverpool, UK L69 3BX.
    Voice: 44-51-794-3669
    Fax: 44-51-794-3715
    Email: rada@compsci.liverpool.ac.uk

STUDENT PARTICIPATION:

Papers with a student as the primary author can enter the
student paper award competition. A cover letter must
identify the paper as a candidate for the competition.
Graduate and undergraduate students are invited to
participate in Multimedia 94. Student volunteers receive
complimentary registration, complimentary meals and the
opportunity to interact with conference attendees in
return for helping with day-to-day operations of the
conference. Housing costs for student volunteers may be
reduced by sharing hotel rooms.

IMPORTANT DATES:

    All submissions due: March 10, 1994.
    Notification of acceptance: June 10, 1994.
    Submissions in final form due: July 20, 1994.
****
<   International Colloquium on New Music Research -
      Composition, Perception and Performance >
20-22 October, 1994

Marc Leman
University of Ghent
Institute for Psychoacoustics and Electronic Music
Blandijnberg 2
B-9000 GHENT
Tel: +32 9 2644125
Fax: +32 9 2644196
Email: Marc.Leman@rug.ac.be.

Introduction
The International Colloquium, celebrating the 30th
anniversary of IPEM, aims to give a state of the
art in new music and new research about music. This
includes aspects of instrumental and electronic music,
computer interactive and multi-media systems, music
related digital signal processing, perception,
cognition, and history. Advanced tutorials will be
presented by the following invited speakers (also members
of the scientific committee):

A. Camurri (University of Genova, Genova, Italy),
P. Berg (Royal Conservatory, The Hague, The Netherlands)
R. Dannenberg (Carnegie Mellon University, Pittsburg, USA)
R. Rowe (New York University, New York, USA)
T. Ungvary (Institute for Electronic and Experimental
Music, Vienna, Austria)

Events
IPEM has played a central role in the development of

contemporary music in Flanders and Belgium. During the
colloquium, a Festival of New Music is taking place,
reflecting the artistic activity in and around IPEM over a
period of 30 years.

Issues
Contributors can apply for one of the following
subject categories:
(1) perception and cognition of new music
(2) new technology for composition and performance
(3) multi-media: the integration of music with other art forms
(4) new music at IPEM
(5) problems of music representation

Contributions
Contributions, in the form of abstract or short papers
 (max 10 pages), will be evaluated by the scientific
committee. Accepted papers will be printed in the pre-
proceedings and a full paper can be demanded after the
conference.

Deadlines
15 mai 1994: submission of abstracts and short papers
15 june 1994: letter of acceptance to the contributors
****
< Earthworks, Space Art, Sky Art, Ocean Art,
   Telecommunications/Satellite Events >
Michael von Uchtrup
433 East Sixth Street
New York, NY 10009
Tel: 212 353-3463

We are seeking Earthworks, Space Art, Sky Art, Ocean Art,
Telecommunications/Satellite Events for inclusion in a
two-hour, five-artist live TV festival to be produced
internationally and broadcast in Japan. Program focus will
be on very large-scaled artworks (currently existing or
works-in-progress) which combine advanced technology with
a consciousness of Earth and ecology. Projected airing
date: September, 1994, though some portions of each
segment may be taped in advance (June/July). Artists are
being offered honoraria for their participation. Please
send documentation (articles, photos/slides preferred),
with return envelope, by March 10th: Call on the
telephone if you have problems meeting the deadline.
****
< A Conference on The Inspiration of Astronomical
   Phenomena: The Effect of Astronomical Phenomena on
   Literature, Art, Myth, and History >

Dr. George V. Coyne, S.J., Director
The Vatican Observatory, Castel Gandolfo
V-00120 The Vatican State
Telephone: 39-6-698 5266
Fax: 39-6-698 4671

Introduction
The Conference will be held from Monday evening, June 27,
through Noon on Saturday, July 2, 1994. One day (June 29)
will be spent on a tour of the Vatican Museum and Library.
The Conference will be held mostly at the Villa Mundo
Migliore, close to the Vatican Observatory at Castel

Gandolfo (which in turn is part of the Vatican State), and
partly at the Observatory (both sites are high in the
Albani Hills, overlooking Lake Albano, about 35 kilometers
southeast of Rome). This affords an isolated location
that will encourage collegiality at the meeting, while
still being convenient to Rome and all major
transportation. Although we are considering further
conferences on this general subject, probably at two- or
three-year intervals, no firm decision will be made until
the first one has been held and evaluated.

Synopsis
We will hold an International Conference to discuss the
effect of astronomical phenomena on human thought and
activity, and to explore how these phenomena have affected
mankind's view both of itself and of the cosmos. The
Conference will study the cultural significance of these
universal phenomena, as distinct from the immediate
physical effects of light and dark, or heat and cold. We
find our evidence in the archaeological, anthropological,
artistic, historic, and literary records, and look for
parallels and divergences in these records throughout
prehistory and history. Scientific studies of
astronomical phenomena will be included only insofar as
they influence a broader cultural context.

This first Conference will focus on four main themes: the
effect of astronomical phenomena on literature, on art, on
myth and religion, and on history and politics. One day
will be spent on each theme. Attendees will include
scholars in these areas, as well as astronomers,
archoastronomers, and historians of science.

The time is ripe for such a Conference. The present
studies in this general area tend to be fragmented and
specialized, with little interdisciplinary activity.
Meetings are usually focused on particular aspects of
culture like archoastronomy or ethnoastronomy, or on the
history of science. This would be the first meeting to
study the impact of astronomical phenomena on such a wide
range of human thought and activity throughout history.

We expect that this Conference would serve an important
role in bringing together for the first time scholars in a
variety of fields to discuss the common theme, for their
mutual enrichment. Artists and historians can be
introduced to the nature and variety of astronomical
phenomena, and can compare their effects on human thinking
and expression. Physical scientists can in turn be
introduced to the rich record of these phenomena that may
afford them a longer time base of observation than the
usual four to five centuries of accurate scientific
records.

As we began to plan this meeting, we found that the
present study in this area is taking place throughout the
world. For that reason, we will invite a number of
speakers from outside Europe, although emphasis will be
put on inviting the remainder (including many more junior
attendees and students) from throughout Europe. The
result will be a unique meeting that will be of great
value to scientists and humanists in Europe, allowing them

to establish new professional contacts and collaborations.

Draft Program
We will advertise the Conference widely in Europe and
elsewhere. Attendance will be by invitation only.
Attendees will be asked to submit papers for presentation
at the Conference. The Conference will be structured to
allow ample time for discussions between attendees from a
variety of disciplines. The number of attendees will be
limited to approximately fifty, in order to make such
informal discussions the rule rather than the exception.
In order to maximize the formal and informal contacts,
attendees are expected to attend the entire Conference.
All attendees will stay and have their meals together at
the Villa Mundo Migliore. Dress will be casual. The
isolated site and its ambiance will encourage just the
informal character of the meeting we wish to achieve. No
specialized knowledge of astronomy is necessary.

[Ed: The full text of the announcement appears as
spaceart.txt on the MIT Press file server. The deadline
was listed as March 1, 1994. Given the late timing of the
announcement, people interested in participating may want
to contact the hosts directly.]
****
< Sculpture City International - Some answers to FAQ's >
Menno Rubbens
Email: menno@dutiq50.tudelft.nl

Background?
In September/October 1994 the foundation ATTILA (based in
Rotterdam, The Netherlands) is organizing an international
electronic workshop. The idea is to send and receive 3D-
models for SCULPTURE-BUILDINGS. Buildings which are
sculptures, and sculptures actually being buildings.
Buildings are regarded as sculptures to work and to live
in. The main topic of the manifestation will be the
relationship between Architecture, Art and Electronic
media. With the increasing influence of electronic media
on our physical world, the way we experience our physical
environment changes. The tendency of communication spaces
becoming more and more a-topic will be of great influence
on the design of architectural-, sculptural- and
cybernetic-space. The dissolving sensorial boundaries
between electronic and physical space will be explored
during the manifestation by connecting cyber- spatial-
design to physical interfaces, such as milling-machines
and VR-installations. Sculpture City is an initiative of
Kas Oosterhuis, Architect in Rotterdam and Ilona Lenard,
sculptor in Rotterdam.

-Status?
Sculpture City International (SCI) is organized as part of
the manifestation Sculpture City Rotterdam (SCR) which
will take place in September/October 1994. At SCR, invited
artists and architects will participate in a workshop in
Rotterdam. The results of the SCR- workshop will be
exhibited in 'Galery RAM' in Rotterdam, together with the
incoming files of the SCI-participants (you). During the
manifestation there will be an exchange of files between
SCI and SCR-participants.

-Deadline?
Since the exchange of files will take place during the
actual manifestation the deadline is September/October
1994.

-Submissible works?
Models of your own electronic designs; designed in
electronic space.

-Data formats?
The data format of the SCI models depends on the programs
used by the participants. At least the following data
formats will be supported:
.DXF
.DWG (Autocad)
.3DS (3D-studio)
If it is not possible for you to submit your models in one
of these formats, please let me know.

-Data exchange?
The exchange of data will primarily take place via normal
telephone connections (binary-files) or via E-mail (ascii-
files). If there will be an FTP-site available is to be
announced later.
****
< Natural Science and Art / Art and Natural Science
   - Attempts at Encounter >
Symposium in Leipzig
December 1 - 3, 1994

Organizer: Universitat Leipzig Kustodie / Bayerisches
Forschungszentrum fur Wissensbasierte Systeme Munchen

Concept: Herbert Franke and Claus Baumann

Contact:
Dr. Claus Baumann   OR   Universitat Leipzig Kustodie
Gohliser Str. 8   Goethestr. 2
D-04105 Leipzig   D-04109 Leipzig
Tel/Fax: 0341/58 32 53   Tel/Fax: 0341/28 64 53

The topic of the event is the manifold connections between
natural science, technology and art, which becomes more
and more significant in many spheres of life in our
electronic age. Leading specialists in the fields of
computer technology, mathematics, physics, medicine, human
ethology, philosophy and aesthetics, etc. will debate this
subject in a critical and enlightening way, focusing
alternatively on natural science and art. Supporting
program: exhibitions, presentations of videos and films,
concerts.
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        |                    |
        |   PUBLICATIONS     |
        |_____|
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< Electronic Review Literary Magazine >

Todd A. Jacobs
Clark Internet Services, Inc.
Ellicott City, MD USA

BBS/Fax ... (301) 890-0686
Voice ..... (202) 388-9742
Email: todd.jacobs@f182.n109.z1.fidonet.org

The Electronic Review Literary Magazine is now available
for FTP@clark.net /clarknet/opt/ftp/pub/jacobs as ER-
9402.ZIP. The Electronic Review is an MS-DOS hypertext
magazine designed to showcase emerging writers and
computer artists.   Each issue contains fiction, poetry,
raytraced and ansi artwork, as well as original computer
comic strips. The magazine is distributed as shareware.
Please contact me directly for further information.
****
< Design and Technology Book Series >

Isaac Victor Kerlow
119 West 23 Street, Suite 1004
New York, NY 10011
Tel: 212-675-8161 or 718-636-3693
Fax: 212-675-8161

Isaac Kerlow reports that he is developing a new book
series entitled "Design and Technology" for the publishing
house of Van Nostrand Reinhold. The books in this series
are to be authored by outstanding professionals, with
"books" being developed for both print and electronic
formats. Kerlow invites designers, photographers,
educators, artists, technologists, and intellectuals to
contact him with questions or proposals.
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                 |     OBITUARY     |
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< Lejaren Hiller >
Andrew Stiller
Kallisti Music Press
810 South Saint Bernard Street
Philadelphia, PA 19143-3309
Tel: (215) 724-6511

Lejaren Hiller (b. 1924) died on 26 January 1994. Dr.
Hiller had been suffering with Alzheimer's disease since
1987. Lejaren Hiller was a noted composer and pioneer of
computer music. His writings have appeared in many
historical treatises on the subject and his use of
computers for composition spanned some 30 years. He
produced important pieces, such as Illiac Suite and
HPSCHD, which pointed a way for many composers who
followed in his trail. The Illiac Suite (c. 1954 is
heralded as one of the first computer-generated
composition. HPSCHD, created with John Cage, is a
multimedia happening in the true John Cage style,
utilizing a variety of computer-based and acoustic
resources in a collage of sights, sounds and eras.

Dr. Hiller taught in the Music Department of the State
University of New York (SUNY), Buffalo, N.Y., and his
complete works (papers, manuscripts, and tapes) will be
transferred to the SUNY Buffalo Music Library over the
coming weeks. Various biographies have been written about

Dr. Hiller. Some of these may be found in David Ewen's
AMERICAN COMPOSERS: A BIOGRAPHICAL DICTIONARY and in Gagne
and Caras's SOUND PIECES: INTERVIEWS WITH AMERICAN
COMPOSERS. If you would like further information about the
Hiller archive being established at SUNY, Buffalo please
contact Andrew Stiller directly.
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      |                        |
      |   JOB ANNOUNCEMENTS    |
      |_____|
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< Arts Wire Network Coordinator >
The New York Foundation for the Arts (NYFA) seeks a
Network Coordinator for Arts Wire. The Network Coordinator
will be hired by and will work closely with the Co-
Directors of Arts Wire, Anne Focke and Joe Matuzak, and
will work as an independent consultant to the New York
Foundation for the Arts. The Network Coordinator will
also work with the coordinators of Arts Wire's special
interest groups and information providers, its technical
consultants, representatives of its online service,
certain NYFA staff members, especially David Green, NYFA
Communications Director, as well as with Arts Wire
subscribers. Most of the communication and collaborative
work with these people will take place online and by
telephone and mail, so the Network Coordinator can reside
almost anywhere.
****
< News Director for Arts Wire >
The New York Foundation for the Arts (NYFA) seeks a News
Director for Arts Wire. (Information on Arts Wire is
attached.) The News Director will be hired by and will
work closely with the Co-Directors of Arts Wire, Anne
Focke and Joe Matuzak, and will work as an independent
consultant to the New York Foundation for the Arts. The
News Director will be responsible for the overall
functioning and development of Arts Wire's news features,
encouraging and facilitating both the gathering and
dissemination of information. Most of the communication
and collaborative work will take place online and by
telephone and mail, so the News Director can reside almost
anywhere. This is considered to be a part-time position.

[Ed: Extended descriptions of responsibilities for the
Arts Wire job postings are available on the file server in
the file artswire.txt.]
****
< Kinetic Communication Designer - Carnegie Mellon >
Communication is being reshaped by new media. How
designers conceive, plan and produce communication, and
how people interact with it, are undergoing revolutionary
changes. Film and video, the computer and television,
sound and motion, time and space, meaning and intent raise
challenging questions about the form and function of
communication in this new environment.

The Design Department at Carnegie Mellon is searching for
an individual with expertise in kinetic communication --
video, film, or computer-based -- to join our
Communication Design Program. With a broad-based
undergraduate curriculum and new graduate programs in

Communication Planning and Design and in Interface Design,
we seek someone to join us as we expand the definition of
communication design.

We also require a master's degree with professional and/or
teaching experience, and an awareness of graphic design
and photography. This tenure track appointment and salary
are commensurate with qualifications at either Assistant
or Associate Professor rank.

Send email inquiries to:
dan+@andrew.cmu.edu (Dan Boyarski, Head of Communication
Design)

Send hardcopy inquiries (a letter of interest with a
resume) to:
Robert O. Swinehart
Chair, Communication Design Search Committee
Department of Design, MM 110
Carnegie Mellon University
Pittsburgh, PA 15213

We will begin reviewing applications on March 31, 1994,
and continue until the position is filled.

Starting date will be late August 1994.
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|                   |
|        LEA        |
|       FORMAT      |
|    CONVENTIONS    |
|                   |
|_____|
```

The following describes the format or markup conventions
used in creating Leonardo Electronic Almanac. The function
of these conventions is to facilitate perusal through the
text, and to make it easier to create conversion programs
to various text readers.

=====: Section Heading Delineation - full line character
        sequence
*****: Item Delineation within Section - full line
        character sequence
<: Item Title - search for the character "<" followed by
        two spaces
|_ or _|: This sequence takes you to the next SECTION
        TITLE.
Item titles and author/contributor names appear exactly
the same in the Table of Contents and at the location of
the actual item.
Section names appear in all capital letters, and with this
issue will appear with all letters in sequence with no
spaces (PROFILES, REVIEWS, etc.).

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|                   |
|        LEA        |
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```
|       FTP        |
|      ACCESS      |
|                  |
|_____|
```

The following are the specifics about ftp access:

```
    ftp mitpress.mit.edu
    login: anonymous
    password: your_email_address
    cd pub/LEONARDO/Leonardo-Elec-Almanac
```

Check the README file for the most current information
about the contents in the system, and for the most current
information about all of the ftp services.
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|                  |
|       LEA        |
|    SUBMISSION    |
|    GUIDELINES    |
|        &         |
|   PAST ISSUES    |
|        ON        |
| TECHINFO.MIT.EDU |
|_____|
```

The Submission Guidelines for Leonardo Electronic Almanac
are available on MIT's techinfo system, which is also
their gopher service. To gain access to this, telnet to
techinfo.mit.edu.

```
    select 2) Around MIT - Offices & Services/MIT Press.
    select 22) MIT Press
    select 5) Journals 1993
    select 6) Leonardo Electronic Almanac
    select 1) Guidelines for Submission
```

Past issues of Leonardo Electronic Almanac are available
through MIT's list server system. To get an index of the
archive, send email to listserv@mitvma.mit.edu. The
"subject" component of the email message is irrelevant,
but the body of the message should contain "INDEX
LEONELEC". The output of this request looks like this:

```
LEONELEC 93-00001   PRV OWN V     77   857 93/10/07
08:05:56
-> Leonardo Electronic Almanac - Volume 1, Number 1
LEONELEC 93-00002   PRV OWN V     73  1577 93/10/06
13:00:25
-> Leonardo Electronic Almanac - Volume 1, Number 2
```

To retrieve an issue of LEA, send email to the same list
server address, with a message body containing "GET
LEONELEC FILETAG", where the FILETAG is replaced with the
file number appearing after "LEONELEC". In the above
example, one would request "93-00001" for LEA 1:1, and
"93-00002" for LEA 1:2.

Submission Guidelines and Past issues are available on the
MIT Press file server via ftp. The anonymous ftp server is
mitpress.mit.edu. The directory containing the files is

pub/LEONARDO/Leonardo-Elec-Almanac. See the README file in
that directory for details.

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 |                    |
 |        LEA         |
 |   PUBLISHING &     |
 |   SUBSCRIPTION     |
 |   INFORMATION      |
 |_____|
```

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members please send VISA/MasterCard information as well.

========== < End of Leonardo Electronic Almanac 2(1) >
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