



Leonardo Electronic Almanac

Volume 4, No. 2

February 1996

Craig Harris, Executive Editor  
Roger Malina, Editor

Editorial Advisory Board

Roy Ascott, Michael Naimark, Simon Penny, Greg Garvey,  
Joan Truckenbrod

ISSN #1071-4391

CONTENTS

INTRODUCTION

< This Issue >

Craig Harris

< LEA Update >

PROFILES

< Zeitgeist >

Larry Fuchsberg

< Arte no Seculo XXI: a Humanizacao das Tecnologias >

Roy Ascott

< family values -

Interactive Installation >

Joan Truckenbrod

LEONARDO DIGITAL REVIEWS

Roger Malina et al

< Special Issue, World Wide Web: The Compleat Web-ster >

Kevin Murray, Guest Editor

< Leonardo Celebrates its 30th Anniversary >

PUBLICATIONS

< TERRA NOVA: Nature and Culture - Volume 1, Number 1 >

David Rothenberg, Editor

ANNOUNCEMENTS

< ISEA 96 Update >

< First International Music Software Competition >

< Multidisciplinary Musical Meetings 96 -

Music & Mathematics >

< Artists Using Water To Make Music >

< COLLAGE: APARTMENTS' MUSICS >

< Electronic Music Foundation Launches Its World Wide Web Site >

< WSCG' 97 -

The Fifth International Conference in Central Europe

on Computer Graphics and Visualization 97 >

< SHANGHAI FAX >

< Symmetry Symposium at the Smithsonian >

OPPORTUNITIES

< The Rooke Chair in Engineering, Design, and Aesthetics >

< Internships Postings - Walker Art Center >

ACKNOWLEDGEMENTS

LEA WORLD WIDE WEB AND FTP ACCESS

LEA PUBLISHING & SUBSCRIPTION INFORMATION

=====

INTRODUCTION
--------------

< This Issue >

Craig Harris

This month Roy Ascott adds to our knowledge about the media arts in Brazil, and Joan Truckenbrod informs us about her new installation "family values". We also have a profile of a vibrant contemporary music ensemble, Zeitgeist. Zeitgeist performed at ISEA 93, and has an international reputation for their work presenting the work of living composers.

In Leonardo Digital Reviews Kevin Murray supplies us with installment two of his perspective on the World Wide Web, "The Compleat Web-ster". This installment applies the theoretical perspective offered in installment one to a diverse group of web sites.

Wim van der Plas provides an update on plans for ISEA 96. There will be many related events in the environ during the same time period for those seeking an extended media arts trip. Many notices about upcoming activities arrived this month, and we find out what Terra Nova's editor David Rothenberg has compiled for Volume 1, Number 1 of this new journal about environmentalism and culture.

< LEA Update >

Much work is taking place on the LEA web site. Visitors will find it much easier to get around, and this process will continue at a faster pace this year. In the interest of developing a vibrant environment in LEA, I am inviting both institutions and individuals to submit the following information for publication in LEA:

Artist profiles: Profiles can be for an individual artist or group of artists who are either exhibiting together, or represent an unifying aesthetic (even if their diversity is the element that brings the group together). Submissions should include brief biographical information, artist statement(s), and abstracts and/or descriptions of recent works. Creative presentations are welcomed, including those that use the resources of the World Wide Web.

We are encouraging artists in all new media arts to supplement their textual information with images and sound, as appropriate. Our grant from Interval Research Corporation makes it possible for us to assist in this process. At this point we can digitize photographs and sound for those of you who do not have access to high quality scanners and hard disk recording systems. Please contact me regarding media formats and data transfer procedures.

Media Arts Facility Profiles: Institutional profiles should provide LEA readers with significant insight into the particular aims, resources and orientation of their facility. This might include a mission statement, a description of curricula offered or research in the case of an educational and research organizations, and descriptions of upcoming events with artist/researcher profiles and abstracts.

Theoretical Perspectives: These pieces are to be used as Feature Articles, and should explore topics of relevance to the realm where art, science and technology converges. Individuals or groups should present detailed insights into their views, with a goal of advancing understanding in an interdisciplinary context. The use of multimedia

resources is encouraged in presentation, and we at LEA can assist in that process in the same ways as suggested above for Artist Profiles.

In LEA we are trying to provide more in-depth information about the new media arts community. If you send in announcements for publication, they need to contain more than just a listing of dates and people. I prefer to publish descriptions of the goals of events, brief bios of participants, abstracts of work to be presented, and pointers to additional information. Notices about new publications ideally would include some or all of a preface that indicates the aim and content of the publication. Items that appear in the same form in FineArt Forum and the ISEA Newsletter are not likely to find their way into LEA, since we still assume that LEA readers are also receiving one or both of those publications. One of my editorial functions is to provide LEA readers with relevant information that is not likely to be found elsewhere. We also have to be realistic in ascertaining the multiple ways that this kind of information can be valuable. Naturally for events and exhibitions we hope that notices in WWW publications will result in more people in attendance. However, most people reading LEA will not be able to attend, and the real value for the highest percentage of readers is going to be in the deep insights into the work taking place that can only be derived if those who submit information for publication make the extra effort to include it in the posting.

=====

PROFILES
----------

< Zeitgeist >

Zeitgeist  
c/o Larry Fuchsberg  
275 East Fourth Street, #100  
St. Paul, MN 55101 USA  
Tel: (612) 224-7522  
Fax: (612) 224-8520

Zeitgeist is German for "the spirit of the age," and Zeitgeist is a chamber ensemble wholly committed to enriching and articulating that spirit. Founded in 1977 to present the music of living composers with passion and authority, Zeitgest has won the admiration of composers and audiences across North America and Europe. In its determination to map the full complexity of our pluralistic and turbulent fin de siecle, the group has explored an astonishing variety of musical idioms, developing close ties with such avant-garde luminaries as John Cage, Terry Riley, La Monte Young, Frederic Rzewski and Harold Budd, and paying special attention to nurturing younger composers. Believing that the range of significant new work is wider than any individual's current sympathies, the musicians of Zeitgeist seek constantly to broaden their acquaintance with existing and emerging styles, making the ensemble a magnet for all that is vital in today's music.

Zeitgeist's distinctive instrumentation - described by Rzewski as "two hitters, a blower, and a piano player" - has been harnessed to create an extraordinary range of timbres and textures: the ensemble, in the words of the "Philadelphia Inquirer"'s critic, "lives in a world of colors scarcely to be matched by symphony orchestras." Individually, the "Zeitgeist Four" are masters of contemporary innovations in instrumental technique; together, they exhibit the almost uncanny unanimity of a well-seasoned professional quartet.

Little wonder, then, that the "Zeitgeist sound", protean yet unmistakable, has fired the musical imaginations of composers who differ greatly in their temperaments and stylistic proclivities. The group's working method also inspire composers' loyalty: every new piece is scrupulously prepared through an animated, give-and-take rehearsal process in which each player has an equal voice, and in which the composer is often intimately involved. This process, which occasionally results in significant revisions, reclaims for performing musicians their once-traditional role as "co-creators" of what they play, and invests Zeitgeist's concerts with an elan and a sense of occasion too seldom encountered on today's musical scene. The ensemble has premiered nearly 100 compositions in seventeen years and retains many of these in its active repertoire.

From its base in St. Paul, Minnesota (USA) Zeitgeist tours extensively throughout the US, playing in venues that range from Carnegie Hall to the Minnesota State Fair, and appearing on radio and television. The group performs often in the Twin Cities area and has collaborated with an array of notable choreographers, filmmakers, poets, and others. Managed by a former American diplomat, the ensemble is enthusiastically devoted to bringing the best of America's music to foreign audiences as well. It has made five extended European tours, and has also introduced domestic listeners to composers representing a variety of other cultures. The musicians of Zeitgeist are also master teachers, sharing their expertise with students and colleagues through residencies, workshops, and other educational programs.

Zeitgeist consists of Artistic Co-Directors Heather Barringer and Jay Johnson (percussion), Thomas Linker (keyboards), Robert Samarotto (woodwinds), and Ruth Mackenzie (voice). A non-profit organization incorporated in the state of Minnesota, it receives generous support from the Dayton Hudson Foundation, the McKnight Foundation, the Jerome Foundation, the General Mills Foundation, United Arts, the National Endowment for the Arts, the Aaron Copland Fund for Music, the Metropolitan Regional Arts Council, the City of St. Paul, and other philanthropies and individuals.

Zeitgeist is launching a Workshop Performance with Composers Jarrad Powell and David Mahler at 7pm, Saturday, March 9, at Shy Anne Studio, 4218 N. Cheyenne, Tacoma, WA USA 98407. More information about this event can be found at:

Dan Senn, Artistic Director  
Newsense Intermedium  
4218 N Cheyenne Tacoma WA 98407  
Tel 206 759 2556  
Fax 206 759 2623  
Email: newsense@nwrain.com  
<http://www.nwrain.net/~newsense/NI.html>  
\*\*\*\*\*

< Arte no Seculo XXI: a Humanizacao das Tecnologias >

Roy Ascott  
Centre for Advanced Inquiry in the Interactive Arts  
Newport School of Art & Design, Gwent College of Higher Education  
Caerleon, Gwent NP6 1XJ, Wales  
Tel/Fax: +44 (0)633 432174  
Email: 100140.2500@compuserve.com

Alvarado (B), Anglade (F), Ascott (GB), Barron (F), Bennet (USA),  
Bodinaud (B), Bret (F), Chemin & Hubner (F), Costa (B), Demiaux &  
Richardson (F), Domingues (B), Donguy (F), Forest (F), Fraga

(B), Garcia (B), Goncalves (B), Guerra (B), Huitric & Nahas (F),  
Jeantet (F), Kac (EUA), Katz (B), Kawaguchi (J), Kusahara (J),  
Legrand (C), Levi (B), Machado (B), Maggi (I), Matuck (B), Medeiros  
(B), Menezes (B), Muller (B), Oliviera (B), O'Rourke (F), Philippe  
(F), Pimenta (P), Pinho (B), Plaza (B), Prado (B), Rokeby (CDN),  
Santaella (B), Sogabe (B), Stelarc (AUS), Tassara (B), Velho  
(B), Venturelli (B), White (CDN), Zamboni (B).

In Sao Paulo, between 28 Nov and 10 December 1995, Diana Domingues  
along with Ana Claudia de Oliviera and Gilberto Prado organised "Art  
of the 21st Century: the Humanisation of Technologies", a major  
exhibition and colloquium which were international in scope and  
visionary in ambition. In addition to the very strong showing by  
Brazilian artists, significant work from Australia, Europe, Japan  
and North America was exhibited at the USP Museu de Arte  
Contemporanea, including screen-based multimedia, virtual reality,  
interactive installation, holography, robotics, and network  
communication projects. This brilliantly devised compendium of both  
new and well established artists demonstrated the essentially  
challenging nature of the digital arts, and the artistic integration  
of cultural diversity that global networks evince. The quality of  
selection and representation were no doubt due in part to the place  
internationally the organisers of the exhibition hold as artists in  
this field.

Joining with a series of dynamic Brazilian speakers, some eighteen  
artists from four continents discussed the state of the art and its  
future perspectives, framed within the overarching theme of  
technology's relationship to the human spirit. The artists, brought  
together at the Memorial of Latin America, itself designed as a kind  
of sweeping launch pad to the future, engaged in the debate of ideas  
over a broad prospectus: the robotics of man-machine symbiosis;  
utopianism; the frontiers of the digital revolution, and its  
historical roots; interactive systems, and planetary communication.  
In the heat much light was generated and many new insights and  
artistic alliances were formed.

Boundless energy, vivid colour, cultural complexity and intellectual  
zest have long been associated with Brazil, but for the visiting  
artists nothing could compare with the human warm and artistic  
solidarity shown them by their hosts in that exotic land.

\*\*\*\*\*

< family values -  
Interactive Installation >

Joan Truckenbrod  
Email: truckenbrod@niuhep.physics.niu.edu

Illinois Art Gallery  
100 West Randolph, Chicago 20100  
February 16 - April 12, 1996

This installation elucidates the myth of family values being touted  
by today's politicians [in the United States]. Political, social and  
economic support for creating families and raising children in this  
country is nonexistent. Low income families cannot afford daycare,  
allowing parents to work. People struggling to form non-traditional  
families are discriminated against. A single mother attempting to  
attend college lost custody of her child. Guaranteed, unpaid  
maternity leave is a maximum of six weeks, with jobs being held for  
only six weeks after the birth of a child. Daycare is prohibitively  
expensive for low income parents. Single parents are continually  
blamed for societal ills. Children born to unwed teenagers are  
blamed on girls. Congress is currently reducing or eliminating

critical programs for children including school lunches, and Head Start programs.

This installation examines these issues. The setting is a working class living room. On the coffee table participants find an interactive scrapbook that I have created with newspaper and magazine articles that illustrate the lack of social, political and economic support for families, and alternatively structured families, who are trying to raise children. Family photos contrast the issues in these articles. The photos and articles with red fingerprints on them have pressure sensitive switches underneath that are connected to a computer. When one of these fingerprints is pressed it triggers an animated collage of photos, text, video and sound on the computer monitor disguised as a television set. Each of our own photos, particularly family photos, embodies a history. Photos are vessels, full of memories. When a photograph or article in the scrapbook is pressed, memories are opened up and juxtaposed with a series of images on the TV. Rudolf Arnheim says that "... the authentic photographic still life is an open segment of a world that continues in all directions beyond the limits of the picture. And the viewer, instead of merely admiring the artist's intention, also acts as an explorer, an indiscreet intruder into the privacy of nature and human activity, curious about the kind of life that has left its traces and searching for telltale clues."

With this interactive scrapbook the viewer opens up photographs, triggering their own family memories. The intent of this installation is to activate the viewer through their own memories, in order to confront members of Congress by voicing the need to support families, both traditional and non-traditional, and for raising children in a manner that facilitates the development of both children and parents.

=====

LEONARDO DIGITAL REVIEWS FEBRUARY 1996
---

Editor: Roger Malina

Coordinating Editor: Kasey Rios Asberry

Editorial Advisors: Chet Grycz, Judy Malloy,

Annick Bureaud, Marc Battier

REVIEW PANEL: Rudolf Arnheim, Marc Battier, Robert Coburn, Shawn Decker, Jose Elguero, Michele Emmer, Geoff Gaines, Bulat M. Galejev, Thom Gillespie, Francesco Giomi, Gerald Hartnett, Paul Hertz, Curtis Karnow, P. Klutchevskaya, Richard Land, Barbara Lee, Roger Malina, Axel Mulder, Youry Nazarov, Simon Penny, Clifford Pickover, Irina Presnetsova, Stephen Wilson, Mason Wong, Jason Vantomme, Harry Rand, Sonya Rapoport, Kasey Rios Asberry, Henry See, Rainer Voltz, Christopher Willard

=====

< World Wide Web: The Compleat Web-ster, Part Two >

Guest Edited by Kevin Murray

Email: kmurray@werple.net.au

In the first part of 'The Compleat Web-ster', I presented the challenge to web designers provided by the various 'hooks' available in HTML for snaring viewers. The hope was that further sophistication of web sites, using devices such as client-pull, would enable artists to evoke deeper responses to their online works than the standard 'net surfing'. Below is a selection of web sites that have inspired submissions from a range of writers. They include both statements from web authors and responses from

visitors. A full HTML version of this issue is available from:

"http://www-mitpress.mit.edu/Leonardo/reviews/webster/compweb2.html".

Enjoy, and beware!  
Kevin Murray

=====  
< The Black Hole of the Web >

Intention: Brad Whitmore  
URL: http://www.ravenna.com/blackhole.html

The Black Hole of the Web is simply an example of dynamic page updating. An evening sometime last year I was talking my mouth off about a bunch of "useless" Web sites that could be made. Many of them I never had intended to see implemented; it was more my way of making fun of the Web and where it could go. My ideas included Wedding Announcement pages, Obituary pages that would last forever, and a number more that were in really bad taste. One of my ideas was a page that would suck you in and take control of your browser - "A Black Hole for the Web". Something to add to the totally useless page.

Well after a year of web innovations many of my ideas from that evening have come frightening true. I have found both wedding announcements pages and obituary pages, and a number of other ones that I think are even more frightening. A page that tells the current time, a calculator page and Carlos made me a Black Hole of the Web page when the technology became available.

One thing I have found completely fascinating is we made only one posting to possibly three news groups about the BHoTW. In fact it explained to people "Do not go to this site!" It is "dangerous". Get this approximately: 1500 people a week visit the site - over 50,000 total have visited since our initial warning. What does this say about people. Is it another example of curiosity killed the cat? Tell people not to do something and about 50,000 will try it. The site continues to attract world wide fan mail that entertains both Carlos and I.

Response: Sadie Rose

The first time I entered the Black Hole, I thought it was a stale joke. Sure, the warning against entry was an unsubtle invitation to proceed. Once I found that my browser had been more or less commandeered by this site, however, I felt a kind of chill rare in its intensity - certainly for web sites. It was like the unexpected intrusion of a monster over the shoulder of a blithely unsuspecting victim. The space created by the web browser, I then realised, had become something I had felt completely in control of. Sure there were always delays getting images and text downloaded onto screen, but these were only technical difficulties. There were no interpersonal and political questions to contend with, as you might find queuing for books in a library, say.

The trick of Black Hole of the Web, no matter how trite it looks in hindsight, brought home the truth that Internet had lured me into an unreal sense of invulnerability. I was glad to be shaken out of it. I know, however, that I'll gradually lapse back into this feeling of security. With some luck, I'll come across another 'black hole' to trap myself and thus liberate me from this nefarious web.

=====  
< Boyce Thompsom Southwestern Arboretum >

URL: <http://ag.arizona.edu:80/BTA/>

Response: Alan Sondheim

This site has engaged my attention. My Netscape opens onto it. I have been into and throughout the desert. The desert is inscription, domains, territories, scuttlings beneath and within the surface, plants harboring cuticles against desiccation, breathing only at night. Creosote might well be the oldest lifeform around; some circles spread for 12,000 years. The point is that the Arboretum site reminds me of my presence there in the past, that it creates an intensity of life forms other than the AI on the screen, that it connects through a projection into what I'd still call the wilderness, no matter how few young saguaro there are. I can dream and breathe in the desert, see from one end to the other, myself lost like a membrane collapsing against the dry heavings of the sky, crystalline, hot and cold.

And the Arboretum has done an excellent job; like many other environmental and cultural sites across America, it has been hard-pressed for money; I'm not even sure whether or not the Desert Plants magazine (which I have subscribed to) is still in existence. The Web pages, complete with maps and illustrations, radiate heat. They're not fancy, but they bring to life something which shouldn't be forgotten and should never be misinterpreted. Too often the desert, particularly vis-a-vis current Continental philosophy (i.e. Baudrillard for example), is treated as empty and "American," as if it were nothing but a furlough for our spirit, criss-crossed by desire and confused notions of frontiers. Nothing is farther from the truth, and these treatments are devastating, since they amount to a cultural imperialism, consuming but not looking at the reality of these spaces, with their complex ecologies; systems of Native American nations, rites, and domains; trade routes and animal trails; late-night fireballs, mirages, and dreams...

The garden sites on the Web spread like the rhizome beneath the post-modern culture MOO (PMC2-MOO); they are worth thinking about beyond the cleverness of the Web, which detracts from its underlying economics, corporate roots, and construction of the consumer. They remind me of shifts beyond the Web, beyond the Net itself; as openings onto the Net, they keep me healthy and wise.

=====  
< "The Dark Pool" & "Love Letters from a World of Awe" >

URL: <http://www-nmr.banffcentre.ab.ca/WPG/DarkPool/index.html>  
and  
<http://www.users.interport.net/~yael/>

Response David Odell

These are interactive sites based on branching choice graphs. In "The Dark Pool" this graph is web-like in its interconnections, with multiple re-entries, clearly designed as a maze-like place where one may wander. One is drawn in by a strong narrative desire but indeed the essence of the piece as a possible narrative becomes more elusive as one wanders, and we are forced to recognize that our wanderings reflect only ourselves, our own choices in this finite mini-universe.

In "Love Letters from a World of Awe" the graph is tree-like framed by a personal testament by the artist, "these reflect the attempt to live an artist's life in a time that is hostile to the endeavour", the little narratives, or theatres of found motifs that



radiate from the central stem, all reflect back onto the absent subjectivity of the artist, they are much like letters or diary entries, experiments towards or material for possible artworks.

There are three discernible levels in "The Dark Pool", the links to a framing context, the Compleat Web-ster page or the sponsoring Art Gallery page, the links within the work proper, delineated by a familiar "artistic" mode of presentation, black background, elegantly cropped mysterious photograph, paragraphs of hypertext, seemingly simple but becoming more complex as the enigmatic relations between them emerge, and certain special links which suddenly take us out of the work and into the context of its making, gray informational screens entitled "Artist's note:" with texts that tell of the origin of some image or part of that image, "A couple of years ago in Amsterdam I went to the torture museum (it's pretty tacky). When I saw a drowning cage for witches I was completely filled with fear. I knew then that I had been in one of them before." It becomes clear after a short time that the universe of the work is strictly finite, one keeps returning to the same points, so that the game for me became to try to get to every node on the graph.

Here a pure desire to exhaust this object took over from an initial desire to solve the mystery of the disjointed narrative. As I did this I kept coming back to a screen containing a photograph of a type-writer and a hypertext link that would take me to a further screen where I would be invited to contribute a response. The enigma becomes a reflection becomes a demand.

"Love Letters from a World of Awe" makes no such obvious demand. One explores the attempt to redeem the everyday by giving it form, making it memorable within the context of this strange medium of virtual and indefinite co-presence. The implicit acts of construction of these memorials to salient moments in the flow of everyday life, have little more intensity to them than one's own acts as a browser, perhaps the coolest activity available to us these days.

One is struck by the how close one of the major motives in recent art, that of making works of a radically democratic kind, works utterly stripped of aura, is here to complete realization. The embodied subjectivities that graze this work are all in their most casual dress, utterly at home, surrounded by household objects, free to scratch and fart as they wish, and each capable of generating from its own "life" a succession of similar possibilities. What would have once been a certain New York style to the piece, a sophisticated and very light knowingness and delectation with the everyday, a filament of Cage, is nothing now but an international style in the loosest sense, a locationless point in cultural space.

We do not yet have a name for what is increasingly being called "cyberspace", since such a name, at this early stage would have to look back towards the receding shore. Whatever it may be, it remains arguable that every "work of art" produced in this new topology of subjective form is an allegory of the nascent ontology proper to it. Who are we as subjects in this prosthetic hyper-community? The two works discussed here are certainly no exceptions to this proposition, but they also seem to illustrate a limitation that still pervades the project. The very aptitude of this synthetic cosmos for finite branching models, seems to hobble its attempts at self-reflection. As if the point at which something finally interesting can occur recedes further and further into the nebulous and neutral gaps when one stares at the banner at the

bottom of the screen, waiting on the daemons.

=====

< Scott Becker's home page >

URL: <http://homepage.interaccess.com/~artscb/scb.html>

Response: Heather Fernon [hfernon@ozemail.com.au]

#### Decoding the Virtual Unknown

For those whose early childhood memories are founded amongst the story telling methods of modern media; captured moments on television relaying the fragments of personal drama and tragedy, shot and edited for mass consumption - how does the on-line engagement challenge our understanding of communication practices?

The Internet has become a catacomb of the late twentieth century western culture. It provides an ongoing exchange space for visual and written dialogue - a dynamic platform through which images and symbols of contemporary society are rendered.

Yet the true identity of the electronic pigeon remains an enigma, hidden behind notions of science fiction and advertising cliché. The possibilities of on-line communication are both restrictive and unique. New boundaries are drawn within screen space and time, which are peculiar to each new user's experience. The interaction of provider and viewer becomes dependent upon the web's ability to utilize and translate its flood of dialog and visuals. With such outpouring of material, the stems of communication are defined by the network of chosen navigational symbols.

One American media artist, Scott Becker explores culturally significant symbols as navigational tools within the 3D virtual environment. The journey through the Australia Interactive for instance, is determined by the participants response to these icons.

The computer becomes the conduit through which to translate knowledge without the sensory experience of human understanding. Like television, it defines without perception of the original aesthetic or its tangible replacement. The identity of the original is hence transformed through the 14" coated light source, glowing two feet or more away from the viewer. Images are dispersed through cultural filters, mediated by technological constraint.

However, the sensibility of the original can only be gained by direct personal experience. The on-line recreation of this identity reflects more upon contemporary sensibilities and symbology than it does the artifacts it seeks to translate. The common experience is one of mass dissemination and translation. It requires the suspension of belief, beyond the experience of the original depth and texture of form - into a contemplation of what lies beyond the digital veil.

=====

< Interactive Dreams >

URL: [http://www.innet.net/brusselsarts/isdm\\_2.0/i\\_dreams/start.html](http://www.innet.net/brusselsarts/isdm_2.0/i_dreams/start.html)

Intention: Hugo Heyrman

I like to work with the digital image in its ultimate elements, the immaterial abstract information of pixels. I love the world wide transportable dimension of the Internet, where the digital data-stream can travel at the speed of light.

\*Interactive Dreams\* is an ongoing WWW-project. Expect the unexpected. Based on the non-linear structure of dreams, it gives

more significance than simply freedom of choice. It draws correspondence with the creative pattern of consciousness. It blows your imagination away.

The \*i-dreams\* are made up in HTML, as an exploration of hyper-fiction by using the art of color transparency. The files are ultra-light & fast and constructed without the use of a scanner. The images are made of enlarged pixels, constructed in Superpaint & Photoshop. Meaning is presented as a poetical metaphor by browsing text & images into a personal morphing of meaning, in order to find simplicity in complexity. It is a form of private art, a dream-like 'synaesthetic experience'. I want to explore Cyberspace and develop a new virtual ABC.

Response: Robert D. Manne

Interactive dreams opens with an invitation to participate in the exploration of unconscious musings. What follows is 19 pages of jagged hyper-pixelated images captioned with messages dealing with heterosexual dilemmas, such as 'In his imagination he understood the nature of a female space'. The final page has an image of man and woman, backs turned to the screen, embracing. The caption reads: 'For them, emotional alchemy was a flexible form of art'. The effect of this conclusion is to give the site a comic feel, assuming some basic understanding shared by couples that helps them overcome the war of the sexes.

The design logic allows for fast downloads and a fairly swift journey through the site. But there seemed an obvious paradox in the use of a linear sequence to evoke a dream logic. The captions seemed a little too declarative to represent the submerged dream narratives that usually manifest themselves as fragments.

I felt by the end that I had witnessed the very surface of someone's dreams, not the churning unconscious forces that motivate them. One positive result of this was to suggest the suitability of WWW as a space for dreams. The ease of publication invites web users to present personal experience like dreams for global dissemination. This contrast between the microcosm of an individual life and the macrocosm of a global computer network would have some pathos. How best to design their presentation is another question, but a thicker weave of hyperlinks would be an obvious place to start.

=====  
< Travels with Samantha >  
URL: <http://www-swiss.ai.mit.edu/samantha/travels-with-samantha.html>

Response: Katherine Phelps [muse@glasswings.com.au]

Once upon a time art was about beauty and ecstasy. These days it is far too often the angst-ridden cry of the professional victim or works of ice cold intellection. Art, for me at least, is a celebration of life in all of its diversity and should express and/or evoke an awareness of our feelings from our encounters with life. This should include elements of both dark and light, not one to the exclusion of the other. I object to art being seen as only those things that are dark and only those things accessible to an elite audience. Where would Shakespeare or Dickens be today? They were both popular humorists. Art can be considered good when it is skillfully executed. It is only great when it touches a broad and enduring audience who carry it from generation to generation. I believe the reason why we have seen so few good answers to the question, "When has a multimedia title made you cry?" has more to do with the sort of art we have been institutionally encouraging rather than the limitation of the media. I know any number of

people, myself included, who have cried over Travels with Samantha which spans the spectrum of human emotion in an online travelogue.

Whether or not you agree with my stance, interactive media such as the Web works best when you have a deep understanding of the nature of play. Trying to get people to wander from segment to segment of your site because they "should", because what you have created is "high art", is unlikely to be successful. Better reasons are: suspense, curiosity, sense of wonder, anticipation, humor. A certain apparent effortlessness, like the intricate dance movements of a ballerina, also needs to flow from page to page giving your audience just enough in each page so that they want more. I find engaging the audience's imagination highly effective. On Glass Wings I describe the subject areas of my site as if they were physical spaces without providing any graphical representation of these descriptions. An example of this would be the Gigggle page. This has been the most remarked upon feature in many Glass Wings reviews. In any case Netculture has traditionally been more focused on the lighthearted. Though student angst abounds, its appeal to other angst ridden students has been limited. Angst ridden humor, on the other hand, seems to be a winning combination. As in any medium if you want an audience, you have to care about yourself, care about your art and care about your audience. No one of these three elements can be skipped over in the process of creation. With the Internet the artist has to confront real numbers in measuring their success rather than relying on how big a party their opening had, then remaining blissfully unaware of their impact in subsequent days. Nevertheless, success is measured in many ways, not the least of which is simply the joy you received from creating a work. No computer I know of has a way of measuring such matters.

=====

< Dick for Day Webpage >  
URL: <http://www.razorfish.com/bluedot/>

Intention: Fiona Giles

Dick for a Day is due for release by Villard Books, a division of Random House (USA) in fall 1996. The webpage digitizes both original material and excerpts from the book, including written text, visual artwork, quick-time, and audio. The page will also be a net to catch more contributions, and will include questions for visitors to answer if they're inclined to, for this purpose.

Mostly I've regarded the page as a form of glamorous, yet virtually free, advertising. Networking advantages are also beginning to emerge as links to other sites, particularly girlie worlds such as All Men Must Die and Femmeworld, begin to take shape. The opportunity for networking without the financial constraints imposed by mummy and baby Bells et al. is especially appealing.

As I work with the painter Yael Kanarek (who is doing both design and html together with many of the illustrations), other benefits are becoming apparent, such as the (to me) liberating lack of a need for uniformity in design or sense of wholeness. After working with books and magazines, where cohesion and consistency is God, this is a huge relief. The space we've been allocated by Razor Fish is truly a playground. The immediacy and disposability of the medium (which may to an extent be an illusion given users' ability to download) also invites greater risk-taking and innovation with material. Rooms (of which we have six to begin) may be discarded and others developed, as we gauge visitors' interests. Although we're striving to include only excellent content, with at least the standards of book publishing, the opportunity for experiment is much greater.

The metaphor of being in cyberwaters which are necessarily shallow, comes merely from the knowledge of screen-watchers' minimal attention spans. But catching the fish quickly, needn't mean losing it with the same alacrity, if (and only if) the content survives the often overwhelmingly visual design favored by website techies. For this reason Dick for A Day has clean and low-key look despite its filthy, funny and intensely communicative desires -- initiating speech across, under, over and through genders and identities. In the land of the girlie hard-on, we trust that our hook is as good as our rod.

=====

< 'Island' Quicktime VR >

URL:

<http://pathfinder.com/@0DsCufGKdwEAQAR7/twep/artslink/artists/fitzgerald/fitzgerald.html>

Response: Yael Kanarek

One project I have come across is a QuickTime VR piece by Janie Fitzgerald and Robert West. I have not experienced a lot of work in this medium and I'm not familiar yet with the technical issues in producing such movies, but purely from the artistic sense I would like to note a few things.

The first few pages that come across as an introduction to the "real" thing are very aesthetic but somewhat unclear in their intention. They remind me of medical drawings and are very different from the actual piece itself. Secondly, I couldn't figure out if there is one QT VR or more. I came across one (which I totally don't regret) called 'island.mov'. I'm not going to get into a detailed description because I would like you to go and see for yourself but while moving around in 'island.mov' some witty shifts in our sense of location and sense of fantasy versus the real world accrue. I found it very enjoyable discovering it by the interactive feature of the QuickTime VR and I found the subject matter totally integrated with the medium.

I think it's a great piece.

=====

< Refugee Republic >

URL: <http://www.t0.or.at/~RR/>

Response: Alex Demidenko

Coming across the "Refugee Republic" on the web is like discovering an Atlantis, slowly emerging from its watery depths. My initial reaction was shock that I hadn't heard of this interesting initiative before. Here was a unique governmental structure supposedly catering to the 50 million refugees scattered around the world: a virtual nation just waiting for its global debut.

I readied myself to gather information. The opening screen provided an image map with pointers to such items as maps, offices, passport, investment and history. The "Maps" sections provided a color-key globe of landmine density, UNCHR bases around the world, and a world atlas in outline, without the coastal outlines that divided them.

Exploring further into the logic, I read that "Refugee Republic maintains that refugees are essentially unrealized capital and that their involuntary fate of an international avant-garde can be turned into productive assets." My first response was dismay that this proposition was being put forward as a calculated form of

venture capitalism. Then the penny dropped that this entire site was a satire aimed to highlight the plight of refugees in the world today.

With this revelation I began to enjoy the more speculative propositions it contained. There were RR passports, Universal Translators and The InteRR(efugee)net. In vain I searched for a sound file of the national anthem ("I was born under a wandering star"?), but the possibility was there.

One of the pointers led to different languages. Critically reflecting on the dominance of English, the French and German extensions seemed to contain information lacking in the English version. In the end, RR demonstrated the potential of the web for dealing with the rise of Diaspora consciousness (as much as it promotes it). Just as we now find an increasing number of pages bonding through abstract forms of identity, such as common names (see the Jessica Page), so it is possible that those whose plight knows no sovereign state, might gain new purpose in this medium. I doubt whether this impression could have been conveyed as powerfully, had not I been skillfully deceived at the opening page.

=====  
< Leonardo Celebrates its 30th Anniversary >

At Leonardo, we will soon (1997 or 1998) be celebrating our 30th birthday. What should we do to celebrate !! Ideas, suggestions for publishing activities or events, electronic or otherwise are solicited. Send email to mason@mitpress.mit.edu

=====  
< END LEONARDO DIGITAL REVIEWS FEBRUARY 1996 >  
=====

PUBLICATIONS
--------------

< TERRA NOVA: Nature and Culture - Volume 1, Number 1 >

David Rothenberg, Editor  
Cullimore 501  
New Jersey Institute of Technology  
University Heights  
Newark, NJ 07102  
Tel: 201-642-4673  
Fax 201-596-3454  
Email: rothenberg@admin.njit.edu

[Ed: Terra Nova was mentioned in LEA 3:5, when it was first announced. Now Volume 1, Number 1 is available, and we provide a summary of the aims and contents below. ]

The journal "Terra Nova" aims to become a journal of major cultural importance, to show that environmental issues are really part of the mainstream of cultural critique and commentary, dissolving the borders between the academic and the readable. With MIT Press behind it, it will be well- designed and distributed to subscribers and newstands worldwide.

Today, there is a need to understand the human relationship to nature in a bold and different way. Terra Nova is the journal of this new culture. It is not one-sided, but diverse and exploratory. It is not sentimental or starry-eyed, but accepts nature in all its confusion and complexity. It does not spurn technology, but looks for creative visions of the future.

"I want to see new ways of celebrating and criticizing nature that have not been given voice before. I want readers to be surprised and challenged, to be thrown together from different camps and asked to reckon with conflicting sides and irreconcilable views. No environmental problem is simple; no encounter between the wild and the tame can be seen in just one way."

David Rothenberg

With the release of Volume 1, Number 1, in January 1996, you too can explore this brave new world of innovative writing and art on nature and culture. This is what you'll find:

- Charles Bowden "Imagine the problem is that we cannot imagine a future where we possess less but are more. Imagine a future that terrifies us because we lose our machines and gain our feet and pounding hearts." Charles Bowden rhapsodizes the rise and fall of the American desert: highways, money, drugs, death, beauty, hope.
- Val Plumwood was nearly eaten by an Australian crocodile and lived to tell the tale, affirming a new respect for predator and prey.
- The famous words of Chief Seattle are revealed as a document of our time: not a forgery, but a genuine attempt of present-day Americans to find a religious voice.
- Michael Tobias climbs naked to the summit of Mount Sinai in pursuit of understanding the ancient text, RA Dispute of a Man with his Ba.S
- Bikram Nanda and Mohamad Talib describe how a poor Indian villager can protest a factory like Bhopal, a surreal and first-time glimpse from another environmentalist culture.
- Michael Fox of the Humane Society introduces a new idea of justice based on respect for the Earth and communal good.
- Robert Pogue Harrison shows us that even Thoreau couldn't build a house without philosophy.
- Jaron Lanier thinks we all should turn into giant squid so we can talk to each other without language.

Terra Nova digs into the mix between the urbane and the wild with contributions from philosophy, literature, history, anthropology, science, environmental studies, politics, activism and the arts. A wide-ranging mix of essays, reportage, interviews, fiction, poetry, photography, and all forms of cultural reflection on the human relationship to nature. By dissolving the borders between the academic and the literary, Terra Nova will show that serious discussion of environmental issues can be found in the most surprising places.

FOR SUBSCRIPTIONS CONTACT:

MIT Press Journals  
55 Hayward St.  
Cambridge, MA 02142  
Tel: 617 253 2889  
Email: journals-orders@mit.edu>

=====



< ISEA 96 Update >

Wim van der Plas  
ISEA  
POB 8656  
3009 AR Rotterdam, The Netherlands  
Tel/Fax 31-10-4778605  
Email: ISEA@MBR.FRG.EUR.NL (Board) or ISEA@SARA.NL (Newsletter)  
URL: <http://www.xs4all.nl/~isea>

So far, we have received some 700 proposals. And they keep coming, even though the deadline has already passed. We will consider proposals for as long as it's feasible to do so. The proposals for papers, panels, posters, roundtables, workshops, and tutorials will be sent to the International Program Committee at the beginning of March. For other aspects of the symposium, especially the Electronic Theater, we can still consider proposals after that date.

You could experience your own Long March through the Electronic Art Events in September: Start in Linz, Austria for Ars Electronica (September 2-7), then travel west for the European Media Art Festival in Osnabruck, Germany (September 11-15) and even further west to Rotterdam, the Netherlands for ISEA96 (September 16- 20) after which you should stay a little longer, because DEAF, the Dutch Electronic Art Festival continues for several days and R96 'Media Man' goes on for another week after ISEA.

Meanwhile, several locations in the Randstad (the agglomerate of cities in western Holland) are joining the action. The National Design Institute (host of the Doors of Perception) and Montevideo/Time Based Arts, both in Amsterdam, as well as the World Wide Video Centre (host of the WWV Festival) and several departments of the The Hague College for the Arts (the 'interfaculty' Image & Sound, the Institute for Sonology and the Royal Academy for Fine & Applied Arts), all in The Hague, are cooperating and/or planning ISEA96 activities. The Hague is only 20 minutes from Rotterdam (by train) and Amsterdam another 40 minutes. Good thing that Holland is so small.

\*\*\*\*\*

< First International Music Software Competition >

Stephen Travis Pope  
Email: [stp@foxtrot.ccmrc.ucsb.edu](mailto:stp@foxtrot.ccmrc.ucsb.edu)

The Groupe de Musique Experimentale de Bourges (GMEB), in collaboration with "Computer Music Journal," announce the first "Concours International de Logiciels Musicaux de Bourges" (International Music Software Competition).

All public-domain or "share-ware" software packages are eligible for the competition. Entries are sought in each of four categories:  
real-time sound synthesis/processing,  
non-real-time sound synthesis/processing;  
computer-assisted composition; and  
interactive control and performance.

The jury, to be chaired by Max Mathews, will award a first prize of FF 5000 and three other prizes of FF 2500 in each category. The winners will be announced during the Bourges "Synthese" Festival, which takes place from 31 May through 9 June in Bourges, France. The winning software packages will also be described in a feature



article in Computer Music Journal 21:1.

The deadline for receipt of submissions is 6 May, 1996.

Submission materials should be sent to:

Concours International de Logiciels Musicaux de Bourges  
GMEB  
Place Andre Malraux  
BP 39, F-18001 Bourges, Cedex France  
Tel: (+33-4820) 41.87  
Fax (+33-4820) 45.51  
Email agmeb10@calvacom.fr

For more information, see the GMEB or CMJ Web pages at  
<http://www.gmeb.fr>  
<http://www-mitpress.mit.edu/Computer-Music-Journal>.

\*\*\*\*\*

< Multidisciplinary Musical Meetings 96 -  
Music & Mathematics >

Dominique Fober  
Email: fofer@rd.grame.fr

Information & registration : Grame / Musiques en Scene  
6 Quai Jean Moulin - BP 1185 -  
69202 Lyon cedex 01 - France  
Tel. (33) 72 07 37 00  
Fax. (33) 72 07 37 01  
email: grame@rd.grame.fr  
<http://www.grame.fr/>

Location:  
Salle Witkowski - Palais Bondy  
18/20 Quai de Bondy  
69005 Lyon - France

Dates: March 16-17, 1996

Special guests: G. Ligeti and B. Mandelbrot

Organized by the French Ministry of Culture and Grame within the "Musiques en Scene" festival, the Multidisciplinary Musical Meetings aims to bring musicians, researchers and industrialists together, around subjects directly related to contemporary musical practice and creation.

These meetings are complementary to strictly scientific conferences and professional shows. They propose to take stock of the present scientific theories, of the existing products, of the current researches and artistic realizations, in order to compare the techniques, the practices and to better understand the aesthetics issues raised by these works.

They are directed as well to musicians than to researchers and industrialists. We hope to provide them with theoretical and practical informations, and with a real multidisciplinary debate on the most present musical issues.

The subject for this year's meetings is Music & Mathematics. From multiple view points, musicians, mathematicians and professors will clarify the relationship between music and mathematics. The program includes about fifteen reports (with the special contributions of the composer G. Ligeti and the mathematician B. Mandelbrot), several

talks and two concerts.

All the communications will be held in french.

Registration fees : meetings, proceedings and 2 concerts  
500F. - student: 200F

The "Music & Mathematics" meeting is organized by the Music and Dance Direction - French Ministry of Culture (Research Department) - and Grame, with the DRAC Rhone-Alpes support (Mission de la Formation continue Musique et Danse) and the "Archipel" collaboration.

\*\*\*\*\*

< Artists Using Water To Make Music >

Chuck Howarth  
Email: 76002.60@Compuserve.com

Gyroscope  
11045 Broadway  
Oakland, CA 94611  
Fax: 510/450-0979

Museum exhibit planning and design firm is creating a database of artists who use water to make music for a planned exhibit in a new science center. Large interactive, indoor/outdoor installations.

\*\*\*\*\*

< COLLAGE: APARTMENTS' MUSICS >

Jerome Joy  
6 rue Fodere  
06300 Nice, France  
Tel/Fax: 33/ 93 56 84 32  
Email: jeromjoy@altern.com

For the manifestation "FOREVER" with artistic and musical events (exhibitions, lectures, concerts, listening room and so on) at Nice France (June 1996), an opening program begins. All of the composers, musicians and artists may send one or several musical or audio pieces, complete or extract, inedited or no (for DAT, magnetic tape, audio tape). The duration isn't important, one second to 15 minutes or more. The programmation-collection'll be play non-stop with a traditionnal audio system (HiFi) into an apartment, as a listening room. You can invite all your friends to answer this proposition too.

Deadline: 20 June.

\*\*\*\*\*

< Electronic Music Foundation Launches Its World Wide Web Site >

Julie Panke  
Electronic Music Foundation  
116 North Lake Avenue  
Albany NY 12206 USA  
Voice: (518)434-4110  
Fax; (518)434-0308  
Email: emf@emf.org  
URL: http://www.emf.org

ALBANY, NEW YORK -- Electronic Music Foundation (EMF) announces a new site on the World Wide Web that will give musicians, listeners and subscribers immediate access to a full range of information and services. The new site also presents several additions to EMF's programs. The additions include:

=>An expansion of CD-eMUSIC to include forms of non-commercial music in the classical and jazz traditions. CD-eMUSIC will continue to focus on hard-to-find CDs and discs published by small labels or independent composers.

=>PLUGGED IN, a new calendar-guide containing dated listings of concerts and other events worldwide, along with related descriptions, comments and articles. EMF also plans to offer an email calendar service that Charter Subscribers and affiliated organizations can use for regional dissemination of notices of upcoming events.

=>The EMF BULLETIN BOARD, a free service for posting questions, searches and announcements. Contact EMF for format guidelines.

=>The EMF compact disc label. EMF is planning the first release in the spring of 1996.

=>The EMF BOOKSTORE, offering worldwide sales of books, CD-ROMs, video tapes, and other media relevant to electronic music.

\*\*\*\*\*

< WSCG' 97 -

The Fifth International Conference in Central Europe  
on Computer Graphics and Visualization 97 >

Vaclav Skala  
Computer Sci. Department  
Univ. of West Bohemia  
Univerzitni 22, Box 314  
Plzen, Czech Republic  
Tel: +42-19-2171-188 direct  
+42-19-2171-212 secretariat  
Fax: +42-19-2171-213  
Email: wscg97@kiv.zcu.cz  
<http://yoyo.zcu.cz/~skala/wscg97.html>

The Fifth International Conference in Central Europe on Computer Graphics and Visualization 97 will be held on February 10-14, 1997 in Czech Republic in cooperation with the IFIP working group 5.10 on Computer Graphics and Virtual Worlds.

Contribution deadline: October 30, 1996

Information on previous WSCG92-96 conferences can be found at the following URL:

<http://herakles.zcu.cz/confer/confer.html>

\*\*\*\*\*

< SHANGHAI FAX >

Hank Bull  
Email: hank@wimsey.com

You are invited to participate in China's First Fax Art Exhibition.

Please send a fax to Shanghai.

The fax machine in China is often characterized as an instrument of free speech. Meanwhile the big news is the freedom to make money. OK, let's talk about money. The theme of the show is

WORLD MONEY

Your design for the new world currency, your spare change, your

space money, your digicash. Any image or comment on money. Send it by fax to

HUA SHAN ART SCHOOL GALLERY

FAX: +81-21-6212-1413

Fax window March 1 - 20, 1996

Exhibition opens March 15, closes, March 25.  
Please include your name and nationality.  
Please inform others of this invitation.

Conceived by Hank Bull in collaboration with the Shanghai Preparatory Group for "Shanghai Fax".

\*\*\*\*\*

< Symmetry Symposium at the Smithsonian >  
May 11, 1996 At Smithsonian  
Washington DC

Istvan Hargittai  
Email: HARGITTAI@ch.bme.hu

The Smithsonian Institution is hosting a Symmetry Symposium in Washington DC on May 11, 1996. Leonardo co-editor Istvan Hargittai will be speaking and also signing the new book "Symmetry: a Unifying Concept".

=====

OPPORTUNITIES

< The Rooke Chair in Engineering, Design, and Aesthetics >

James P. Rice  
Rooke Chair Search Committee  
Bucknell University  
Lewisburg, PA 17837

The Rooke Chair in Engineering, Design and Aesthetics will integrate the essential dimensions of engineering, design, and aesthetics for engineering and non-engineering students alike at Bucknell. With a focus on fostering creativity in design, the Rooke Chair will examine the past and current role of aesthetics in engineering and the nature of the creative process.

In filling the Chair, the University seeks candidates with established records as teacher-scholars (Ph.D. required) at the associate professor level in one of the engineering disciplines offered at Bucknell - chemical, civil, computer science, electrical, and mechanical - who have demonstrated an interest in creativity and the aesthetic dimensions of design. The successful candidate will also have demonstrated a commitment to quality undergraduate engineering education and a capacity for developing Bucknell's special potential for interdisciplinary teaching and scholarship at the interstices of engineering, fine arts, the sciences, and the humanities.

It is anticipated that the position will be filled prior to the beginning of the Fall 1996 semester. Applicants should send a detailed resume, the names of three references, and a statement of research and teaching interests by March 15, 1996 to the address above.

\*\*\*\*\*

Julie  
Email: JulieL@walker.mus.mn.us

Send materials to:  
Gary A. White  
Human Resources  
Walker Art Center  
Vineland Place  
Minneapolis, MN 55403

The Walker Art Center in Minneapolis, Minnesota is accepting applications for two annual internships:

WALKER ART CENTER. Curatorial/Education NEA Internship. This one-year internship starting in Sept. 1996 will work with curatorial and education staff on a variety of projects related to exhibitions, film, and performing arts. MA in art history with emphasis in modern/contemporary art or BA degree with equivalent museum experience and excellent verbal and written communication skills required. \$18,000, excellent benefits, great art, and travel allocation. For consideration, send statement of objectives, resume, curriculum vitae, three references, transcripts, and writing sample by March 8, 1996 to Gary A. White, Human Resources, Walker Art Center, Vineland Place, Minneapolis, MN 55403. EOE/AA

WALKER ART CENTER. Lila Wallace/Reader's Digest Curatorial Intern for Diversity in the Arts. This one-year internship beginning Sept. 1996, will provide curatorial and administrative experience for those entering the museum profession and supports our goal of increasing the pool of candidates currently underrepresented in the museum field. Walker is especially interested in applicants with prior experience or familiarity with contemporary art and related issues to Asian, African American, Native American, Hispanic or other diverse cultures. Applicants from these cultures are strongly urged to apply. The intern will work with the curatorial staff on exhibitions and programming related to the permanent collection including research, preparing interpretive materials and exhibition installation. A degree in art history, anthropology, cultural or ethnic studies, museum studies, or related fields and excellent verbal and written communication skills required. \$18,000, great art, excellent benefits, and travel allocation. Application deadline March 8, 1996. Send letter of interest, resume, curriculum vitae, 3 references and writing samples (both academic and general audience, if available).

=====

| ACKNOWLEDGMENTS |  
| |

LEA and Leonardo/ISAST gratefully acknowledges Interval Research Corporation for its continuing support of Leonardo Electronic Almanac.

---

| LEA |  
| WORLD WIDE WEB |  
| AND |  
| FTP |  
| ACCESS |  
| |

The LEA Word Wide Web site contains the LEA archives, including all

back issues, and the Leonardo Electronic Gallery. The Profiles and Feature Articles have been extracted from the back issues, and reside in their own sections of the site. It is accessible using the following URL:

<http://www-mitpress.mit.edu/LEA/home.html>

Back issues, submission guidelines and LEA Gallery files are available via ftp anonymous, using the following method:

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

---

LEA
PUBLISHING &
SUBSCRIPTION
INFORMATION

Editorial Address:

Leonardo Electronic Almanac  
718 6th Street SE  
Minneapolis, MN 55414-1318  
Tel: (612) 362-9390  
Fax: (612) 362-0097  
Email: harri067@maroon.tc.umn.edu

---

Copyright (1996)

Leonardo, the International Society for the Arts, Sciences  
and Technology

All Rights Reserved.

Leonardo Electronic Almanac is published by:

The MIT Press Journals  
55 Hayward Street  
Cambridge, MA 02142 USA

Reposting of this journal is prohibited without permission of Leonardo/ISAST, except for the posting of news and events listings which have been independently received. Leonardo/ISAST and the MIT Press give institutions permission to offer access to LEA within the organization through such resources as restricted local gopher and mosaic services. Open access to other individuals and organizations is not permitted.

---

< Ordering Information >

Leonardo Electronic Almanac is \$15 to Leonardo/ISAST members and to subscribers to the journal Leonardo. The rate for Non-Leonardo subscribers is \$25.00

Send orders to: [journals-orders@mit.edu](mailto:journals-orders@mit.edu)

Please include full mailing address or MIT Press account number, telephone and fax numbers, and e-mail address. Please send VISA/MasterCard information as well.

---

ADVERTISING
-------------

Individuals and institutions interested in advertising in Leonardo Electronic Almanac, either in the distributed text version or on the World Wide Web site should contact journals-info@mit.edu at MIT Press for details.

=====  
===== < End of Leonardo Electronic Almanac 4(2) >  
=====