Leonardo Electronic Almanac
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CONTENTS

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INTRODUCTION

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< This Issue >

Craig Harris

Leonardo Electronic Almanac Volume 7 Number 3 presents articles that place new media art in an historical perspective, bringing how things have transformed into high relief.

Michael Punt explores the way that digital imaging and electronic media have changed the nature of the images that we see in art works in an article based on his presentation at the World Wide Video Festival in Amsterdam in 1998.

Information technologist, artist, and poet Lin Hsin Hsin presents another in a series of articles published in LEA relating to identifying ways to reconnect with the power of traditional art tools such as the brush stroke using a common human computer interface - a two-button mouse.

Curtis E.A. Karnow presents insightful perspectives of new media and archeology in his Editorial "Ubiquitous Computing, and Time."

Also this month Leonardo Digital Reviews contains several book reviews and a review of The Touch Festival by STIEM.

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FEATURE ARTICLE

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< Every Pixel takes its own journey -- using a common human computer interface to create 2-D digital art >

Lin Hsin Hsin

Lin Hsin Hsin
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URL: <http://www.lhham.com.sg>

Abstract

In a virtual world of deep technological drums and gongs, bells and

whistles, will ancestral brushstrokes fabricated by animal hair and bristles painted by a human hand still be considered as mandatory and irreplaceable tools for creating art that has adorned museum walls, public spaces and private homes? This paper examines the power behind a common human computer interface, one that of a two-button mouse, in its capabilities of mimicking the tools in the real world. It demonstrates what this human computer interface can do in creating fresh new original unique paintings as seen in the repertoire of western and oriental paintings with new painting techniques used in creating an array of charcoal and pencil "sketches", "oil paintings" and Chinese "ink paintings" by the author.

Instead of leaning on to the prosaic and uninspired pink bunnies and vainglorious computer graphics created by the tawdry mouse clicks, this paper reveals what true digital art can be. It demonstrates the capabilities of what a two-button mouse can do as shown in the sophistication and indistinguishable (from that produced by the conventional brushes) brushstrokes. As discussed, therein lies the promises and issues, in the hard realism of the replacement of real world "brush paintings" in exquisite technological silence. Let all scanning cease and virtual paintings begin.

Bio

Born in Singapore. Lin Hsin Hsin graduated in Mathematics from University of Singapore and postgraduated in Computer Science from University of Newcastle-upon-Tyne, England. Lin studied music and art in Singapore, printmaking from University of Ulster, paper making in Ogawamachi, Japan and Paper Conservation from University of Melbourne Conservation Services.

Todate, Lin held 15 solo exhibitions in Singapore, Amsterdam and San Jose. She has participated in more than 190 group exhibitions in 49 cities and 20 countries across Asia, Europe, North and South America. She has been awarded a silver medal from Societe des Artistes Francais, Paris, 1985, IBM Singapore Art Award, 1987, visiting Fellowships from Germany, 1988 and Japan Foundation, 1990. Lin's artworks are in private, public and museum collections in Asia, Europe and North America.

As an artist, Lin specializes in oil besides making plexiglas sculptures and ceramics. In recent years, she has pioneered several methods and has created a repertoire of some 1,000 digital art, Web Art and Net Art as well as large scale Digital Installation Art. Her award-winning computer-animated Lin Hsin Hsin Art Museum on Web was inaugurated on April 19, 1995. It was the first of its kind in Asia and has been visited by more than half a million visitors from 107 countries todate. The Museum has been awarded as the "Top 5% of All Web Sites" by Point Communication, U.S.A., September 1995 and became "Top 1000 Web Sites" subsequently. Other awards include "Virtuocity Award" by VXR Corporation, U.S.A., July 1996. Besides being nominated as the "PCNovice Guide to the Web: the 2500 Best Sites" in the Art Category by Sandhill Publishing, USA, July 1998, Lin was named one of the 200 cyber personalities in "24 hours in Cyberspace" on the Web Site as well as the book of the same title published by Simon & Schuster on February 8, 1996.

Lin has penned more than a hundred articles on Information Technology, besides having her poems published in USA, Singapore, Japan and Switzerland. As an author of 5 poetry books, her "Love @ 1st Byte", 1992 is the world's first collection of techno-poems on computers. In November 1997, the world's first collection of techno-poems about the

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Internet titled “In Bytes we Travel” was published. Lin has been awarded the Golden Poet Award in USA in 1989 and 1990.

In real life, you can e-mail her in any of the twelve programming languages that she speaks or preferably in Chinese, English, French and Japanese.

... [Content omitted: Ed.] ...

[Ed. note: the complete content of this article is available at the LEA website: <http://mitpress.mit.edu/e-journals/LEA/>.]

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< Between the Waves: reflections on art, technology and public affairs since 1968 (excerpts) >

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[Ed. note: Michael Punt is editor in chief of Leonardo Digital Reviews.]

(An extended version of this paper was given at the World Wide Video Festival in Amsterdam in 1998. It is reproduced here without the benefit of video clips. Many of the artists cited are however well represented in catalogues and on websites).

When I was approached to make this presentation I was asked if I would think about the way that digital imaging and electronic media have changed the nature of the images that we see in art works. At the time one of the projects that I was working on involved thinking about how artists were prepared for the experience of working with Internet technology - whether it was a straight forward technological inevitability or if some aspects of recent art practices might have predisposed us to turn to the net as it became available - or perhaps even have been instrumental in achieving the levels of public access we enjoy now. The purpose of that reflection was to evaluate the relevance of cinema and television studies to electronic media and especially the internet.

One of the conclusions that I have tentatively arrived at is that video art is a crucial factor in shaping the way that we work with net technologies but in process of transition the political agenda which seemed important in the 1980s has evaporated. Consequently I am going to approach the issue of the image not from a formalist point of view, but as a reflection on art and political interaction. And to be clear at the outset by politics, I mean not only the specifics of the government of states, but also in the more general sense of public affairs. The method I am going to use also has its pedigree in the 1980s.

I am going to look at what happened at the edges of art practice rather than the mainstream centre - the big names and major cannons - for a number of reasons. First in many areas of cultural analysis,

such as film and television studies, this has been a useful methodology. Second, with notable exceptions (most of whom are represented in this festival) technologically mediated art is most active in the social margins. Finally, since Julia Knight has brought together an excellent account of the main stream and I have spent a career inhabiting the margins as an artist and teacher, I will deal with the territory I have experienced at first hand, and in that sense this presentation is a personal journey which I hope will have a general significance. I am going to use my own history as an artist as a typical case and show some work by a number of artists to help think about how a concern with public affairs has shaped the way that we interact with electronic media.

But be warned in advance that the history that I am going to use to consider this question is idiosyncratic, partial and omits much relevant material, it is a practising European sculptor's view of art history. Within the limits of this presentation there are significant omissions - there is no mention here of kinetic art, sound works or robotics. Nor are the other arts such as music, literature or theatre - included all of which have been subject to the same changes in the technologies of production, distribution and exhibition with which the visual arts have had to negotiate.

You may take comfort, however, that its also not a thinly disguised retrospective recycling of old works and a past career to a captive audience. It is strictly a view from a distance, and from the edge, which avoids some of the economic determination of contemporary art history in order to foreground the image and the creative process in the last three decades relative to public affairs. The first part of the title of this presentation is taken from the last analogue one person exhibition I mounted in 1984.

The work in 'Beneath the Waves' was wilfully hand crafted - made almost exclusively from simple materials directly manipulated. It was not a negative reaction to technology but an attempt to draw attention to, and reinstate, some of those things beneath the waves as the object disappeared in a burgeoning electronic culture. What I want to consider first in this presentation is the undercurrents which might have prepared us to use electronic technologies in art works and impacted on the sorts of images that we came across. To look beneath the waves to some of the less visible, but no less influential forces which have shaped the way that we think about technology and art. There is a seductive temptation to regard the use of video and digital media as the inevitable impact of technology on art. But the process does not entirely seem to be driven by the availability of particular kinds of machines and materials. More often it can be a tactic in a struggle between and within generations for influence.

... [Content omitted: Ed.] ...

[Ed. note: the complete content of this article is available at the LEA website: <http://mitpress.mit.edu/e-journals/LEA/>.]

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< Editorial: Ubiquitous Computing, and Time (excerpts) >
Curtis E.A. Karnow

Ubiquitous Computing, and Time
By Curtis E.A. Karnow
Email: <cek@sonnenschein.com>
[Ed. note: Curtis E.A. Karnow is a longtime editorial advisor for Leonardo Digital Reviews.]

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"Even God cannot change the past."
-- Agathon (c. 446-401 BC) Aristotle, Nicomachean Ethics VI

Paint the image of ubiquitous computing. Every surface and innard swapped and replaced with a thin film of pixels, a billion lenses reflecting light from every source, the blue of self reflecting light from every self-referencing mirrored light source. Every surface layered with intelligent chips and sensors, a strata of complex computation. We see a depth not physical, not inches of wood or even metal or even plastic, but a depth of mutable information, all layered in the thin screen of chipstuff coating every thing we see and touch and smell. That is the promise, the gift of ubiquitous computing. And think of the potential. Programmed clothes and skins. Prose at a touch, the effervescent flickering of light beams playing on the substrate. Art everywhere. Theater in the round, with a vengeance. A terminal on every wall, no, every wall and cabinet a terminal. An infinite indistinguishable sea of terminals. Every surface a movie screen.

The fickle recombinant image, triumphant.

Where is archeology here? No record is trustworthy.

Think about torn paper, chipped wood, the stone of Ankor Wat moldering and smoothed by water and air and jungle for all those years; the sand against the weathered stones of the Pyramids. Think, even of the lines about your own eyes and mouth, those lines that tell your lover who you are. Remember old catalogue cards in libraries, the fading indigo and purple ink roundly scripting the year 1923 in a way that commands attention, and trust in its manifest age. Consider the old American basket, frayed at the edges, dirty with the stain of ground acorns; ancient lake water. The physical world speaks its truth in its age, in its battered state, in its missing beats, its dust and dirt, in its manifest time. Even the smell of leather, why we love those books of gold embossed. The worn scarps and shattered rocks do the same; they promise us a role in the unraveling of time, a place in history. Even as we dig the remains of our past, so we imagine that our pale bones and ashes, and the pieces of our work, will be remembered, uncovered, associated with a period of time. This is what we mean by evidence, that an object has had a certain kind of history. An object is authenticated by its unique path through four dimensional space-time.

... [Content omitted: Ed.] ...

[Ed. note: the complete content of this article is available at the LEA website: <http://mitpress.mit.edu/e-journals/LEA/>.]

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LEONARDO DIGITAL REVIEWS
1999.03

Belik Firebaugh, Andreas Broeckmann, Sean Cubitt, Shawn Decker, Tim Druckrey, Michele Emmer, Josh Firebaugh, George Gessert, Thom Gillespie, Tony Green, Istvan Hargittai, Paul Hertz, Richard Kade, Douglas Kahn, Rhama Khazam, Patrick Lambelet, Michael Leggett, Michael Mosher, Axel Mulder, Kevin Murray, Jack Ox, George Peperell, Clifford Pickover, Harry Rand, Sonya Rapoport, Kasey Rios Asberry, Rhonda Roland Shearer, Yvonne Spielmann, Barbara Lee Williams, Stephen Wilson, Arthur Woods

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< Conference Review: The Touch Festival >

STIEM
Amsterdam, Holland, 14-18 December 1998

Reviewed by Rahma Khazan
Email: <rama@club-internet.fr>

A December day in Amsterdam. STEIM's "Touch Festival" is under way and strange, untoward bursts of sound are resounding through the Frascati Theatre. In the venue, members of the public are queueing up to try out the MIDI Conductor, a pair of interactive glove-like instruments equipped with sensors that trigger sounds as the player moves his hands. The Little Web proves equally popular: by moving a finger across this web-like structure of interconnected harp strings, the player can trigger a symphony of electronic sounds in real time.

These devices on show at the Frascati Theatre were built by STEIM , the Amsterdam-based electronic music research centre. Over the years, it has been developing instruments that call for physical gestures and performance skills, which have helped to take electronic music out of the studios and into the concert halls. This growing trend was the subject of the five-day Touch Festival, which comprised a hands-on exhibition, a symposium and a series of concerts.

The symposium set out to examine the musical, scientific and philosophical implications of live electronics, bringing together computer music pioneers such as David Wessel and George Lewis, a philosopher and performers from a wide range of backgrounds. The organizers of Touch, electronic musicians and performers Michel Waisvisz and Joel Ryan and media theorist Sally Jane Norman, outlined some of the essential issues : these ranged from the importance of physical movement and touch, which have been relegated to the sidelines by the streamlined digital interfaces of our present-day information society, to the particular forms of intelligence that characterize the performing arts, such as the live performer's mental agility and ability to play with time. They also stressed that electronic instruments should demand the same level of playing effort as traditional musical instruments, because virtuosity and skill are central to live performance.

The speakers responded for the most part by outlining their personal research and experiences. Computer musician and trombonist George Lewis talked about his improvising computer, which can analyse his performance on the trombone and generate music accordingly, while he plays. British musician Trevor Wishart demonstrated his proficiency both as a performer and as a composer of electronic music : he illustrated his talk with a remarkable piece based on the treated voices of Princess Diana and Margaret Thatcher, following it up with a stunning demonstration of his vocal improvisation skills.

The symposium also featured presentations by non-musicians: juggler Tim Roberts and puppeteer Roman Paska fleshed out the discussion, by highlighting the parallels between the different branches of the

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performing arts. Astronomer and Leonardo editor Roger Malina put a new slant on the notion of man-machine collaboration : the robots he was building for space research could see and hear things that we cannot perceive, and so only humans and machines together could build a consistent view of the universe.

Three evenings of performances rounded out the presentations and the animated discussions to which they gave rise. The artists included some of the leading names in the electronic performing arts - Laetitia Sonami, Jon Rose, Joel Ryan, Michel Waisvisz and Steina Vasulka - and they proceeded to give the audience a taste of its diversity and richness. It's early days yet for live electronic music, but the Touch Festival showed that the public is ready for more.

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< Book Review: The Grid >

The Grid: Blueprint For A New Computing Infrastructure

(ed. Ian Foster & Carl Kesselman 1999)
677 & xxv pages including index, bibliography, & glossary.

Reviewed by Curtis E.A. Karnow
Email: <cek@sonnenschein.com>

Apres Moi, Le Deluge

Over thirty contributors make this a comprehensive, massive tome on the projected next leap of the global computing infrastructure. Alluding to the power grid, the authors make the case for a computational grid, able to harness massive power and databases fed into the smallest local terminal, much as the power of nuclear reactors and water dams light the bulbs on our scattered desks.

The collection has four stated goals - a manifesto urging the construction of the grid; a design blueprint, a user guide, and a research agenda. It does all these, admirably. It will likely serve best as a text for courses in networking and distributed computing and reference work. But more importantly, this books is a beacon to those of us who follow the development of computing, who prognosticate, and wonder what the Internet will be, and hope how to leverage the stunning power of networked computers to qualitatively new uses.

But among the lessons here is how very hard it is to make a network, a true network of particles of every shape and size. Because we will not tear down the present infrastructure for a new one, inconsistent systems must be harnessed. And these are inconsistent in so many ways- different architecture, languages, operating systems, security systems, memory usage, data structures, and on and on. The challenge is to flow smoothly data and operations from massively parallel supercomputing systems all the way down to handheld machines; all the while maintaining data integrity and security, speed of access and seamless environments, fault tolerance, solving performance bottlenecks, and so on. The authors here do not shy away from the issues: the chapters here outline potential solutions, citing existing architectures, applications that are up and running, operational high bandwidth, very high speed wide area networks, and the development of the Globus Toolkit which provides basic grid services.

The book describes grid-enabled applications such as weather forecasting, database management with complex high dimensional data, modeling complex systems such as stars and ocean systems. These do not, however, address the promise of the Grid: such applications are already available to a significant degree at present supercomputer

sites, and do not leverage distributed computing power for the individual. But one chapter, devoted to teleimersion, does signal that promise. To be sure scientific (including medical) visualization, architecture review and scenario simulation are furthered by teleimersion, but so is art, and human contact. The computing power, enormous throughput, and communications infrastructure contemplated by the Grid is essential to what we used fondly to call virtual reality?a reality that, if the authors of the Grid are right will seamlessly augment this one.

It is no surprise that the new cannot be predicted. Technology does not only fulfil needs, it makes them; we cannot imagine the applications emerging from reliability and location independence among personal digital assistants and networked computers.

Of particular interest to those interested in distributed autonomous computing is one author's confirmation that an agent-based approach will likely be needed to manage complex high speed widely distributed networks. In an operational Grid, when we observe that something has gone wrong, it is generally too late to react. Agents with adaptive behavior must be trusted to manage and fix the Grid. And I expect that human supervisory control will increasing high level. Predictable performance will become an increasing challenge; I hope the system treats us well.

This volume treads lightly or not at all on the social implications of the Grid. But it does provide the unvarnished detail of the Grid's slow eruption, protocol by protocol, tool by tool and program by program. Its detail conspires to make us believe it will happen.

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< Book Review: The Alphabetic Labyrinth >

The Alphabetic Labyrinth: The Letters in History and Imagination
Written by Kpjamma Dricler.
Thames and Hudson, London, 1999
320pp, illus, paper, $27.50
ISBN 0-500-28068-1

Reviewed By Cliff Pickover
Email: <cliff@watson.ibm.com>
URL: <http://sprott.physics.wisc.edu/pickover/home.htm>

Johanna Drucker is an expert in the history of the alphabet, printing, and book arts. She teaches art history at Yale University. In this stimulating book, she traces the history of writing from its birth to modern times. Along the say, Drucker unravels a wonderful array of ways in which letters have been assigned value in political, religious, and spiritual systems.

Drucker documents the ideas of Plato, the Pythagoreans, the Romans, the early Christians, and the significance of letters in alchemy and the Kabbalah. The book is gorgeous, profusely illustrated, and sure to delight artists, historians, modern font creators, and even cryptographers interested in bizarre symbols and their meaning. Even if the book did not contain a single line of text, the images of ancient alphabets and strange geometrical diagrams would pursued me to buy this book.

In addition to serving as the means to record speech or ideas in writing, the letters of the alphabet also constitute a set of visual symbols. These shapes have played a part in the decipherment of their history and transmission and have inspired imaginative interpretation of their apparent or hidden meanings.

The Alphabetic Labyrinth covers the complete history of the alphabet from its religious origins to the present day use of computer typography. Buy this book and feed both your eye and mind.

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< Book Review: Scientific Instruments >

Scientific Instruments, 1500-1900: An Introduction
by Gerald L. E. Turner.
University of California Press, Berkeley, CA, 1998.
144 pp., illus. Cloth, $40.00.
ISBN: 0-520-21728-4.

Reviewed by David Topper
E-mail: <Topper@UWinnipeg.ca>

Turner is surely one of the foremost contemporary historians of scientific instruments. His latest book constitutes a general introduction to instruments from about 1500 to 1900, placing them is their historical context with respect to earlier instruments. It is not a chronological history but rather a topical survey of the subject. The range is extensive, almost breathtaking, covering not only conventional subjects such as astronomy, navigation, surveying, and medicine, but also including instruments used in weighing, measuring, calculating, and drawing. As such, in a profusely illustrated text of only 136 pages, no instrument is discussed in much depth. For example, the eidograph (a 19th century instrument for reducing and enlarging a drawing) gets one paragraph of description, the mention of its inventor, and no illustration. The slide rule, on the other hand, gets about 10 pages with an illustration. The book is thus valuable as an introductory survey of instruments; this is especially true for the more obscure ones. However, the more ubiquitous camera gets less than a page with no illustration.

The text is clearly written, requiring little technical knowledge, beyond an understanding of the subject for which the instrument was designed. In addition to dealing with the history of the instruments, Turner also often refers to the manufacturers and maker, as well as tips on dating; at the end of the book is a list of major museums and collections in the world. Hence the book may be of value to collectors. There are 30 black & white and 76 color plates: a perusal of which reminds one that there was a time when scientific instruments were works of art - or, at least, expressions of exquisite craftsmanship.

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< Book Review: Musical Instrument Design--Practical Information >

Musical Instrument Design-Practical Information for Instrument Design
Written by Bart Hopkin
See Sharp Press, Tucson, AZ. 1996
181 pages with illustrations, paperback
$18.95
ISBN 1-884365-08-6

Reviewed by Josh Firebaugh
Email: <jhfireba@mit.edu.>

Whether you want to design a balloon mounted bar gong or a conventional drum, this is the book for you. Bart Hopkin's book explains basic concepts of sound and music as well as describing different types of instrument designs. This book is an invaluable source for both the seasoned, or novice, instrument designer. Anyone with a serious curiosity or interest for the nuances of how musical

instruments are created should buy this book. Hopkin's work embraces many instruments which do not require extensive facilities or great experience to construct. The book takes pleasure in explaining instruments of humble origins from around the world. Although the author briefly discusses traditional symphonic instruments such as violins and brass, he focuses on unconventional instruments, many of which are straightforward to construct.

The book begins with a discussion of how one perceives sound and the mechanics of sound vibrations. The next chapter illuminates acoustic principles, followed by an explanation of tuning systems. Chapter 4 is the first in a series of sections which describe various families of instrument types, based on the Sachs-Hombostel System. For beach lovers, here is where you learn how to make a driftwood marimba. Next we explore beaters of all shapes and sizes. The section on Aerophones describes instruments in which wind chambers excite vibration. Hopkin saves chapter seven for drums. The only area of drum design which Hopkins leaves unexplored is the customary way in which animal skins are prepared for drum heads.

Chapter eight delves into resonators and radiators, systems which help to project the sound of instruments. The explanation of how to make a "styro-guitar" shows that, with a little creativity, almost anything can be transformed into a musical instrument. Next, string instruments and materials are illustrated. A detailed explanation of string stopping points and the mathematics of the ratios underlying the points exemplifies the level of detail provided by the author. A chapter dealing with special effects of various types precedes several appendices. The appendices include information on tools and materials, frequency and tuning charts, amplification, microphones, transducers, and wind instruments. A glossary, bibliography, and index are included.

Bart Hopkin explains well how to make a wide variety of instruments, from the simple to the complex. His unique perspective provides a fresh look at instruments particular to certain regions of the world. The author's delightful illustrations enliven the text. Although appropriate for either the beginner or the seasoned instrument maker, the book is designed for those with a serious interest in the instrument making. The text of this book can be fairly dense, in the positive sense of providing a great amount of detail in an organized format. The book offers abundant technical information, and is by no means a superficial summary. An exquisite book for those with a passion for the design of musical instruments.

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Leonardo Digital Reviews is also available online at
<http://mitpress.mit.edu/e-journals/Leonardo/ldr.html>.
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OPPORTUNITIES

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< Brown University Master of Arts Program in Computer Music and Multimedia Composition >

Todd Winkler, Director
MacColl Studio for Electronic Music

 ISSN 1071-4391 ISBN 978-0-9833571-0-0

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Brown University Master of Arts Program in Computer Music and Multimedia Composition

The Brown University Department of Music announces a new graduate program in Computer Music and Multimedia Composition, leading to a Master of Arts degree. Applications are now being accepted for the 1999-2000 year. Financial aid is available.

For more information and application forms contact Todd Winkler.

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ANNOUNCEMENTS

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< OLATS News >

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OLATS/Observatoire Leonardo des Arts et des Techno-Sciences:
http://www.olats.org

1 - OLATS has got its own house!
OLATS has got a new address : <http://www.olats.org>
Check your bookmarks.

2 - Pioneers & Pathbreakers : Opening of the Frank Malina web site The goal of the Pionniers & Pathbreakers project is to document online the work of the artists from the XXth Century whose creations, thoughts and ideas have been seminal in the field of art, science and technology. This project is structured around 3 axes : development of new researches initiated by OLATS hosted on its web site (ie : Frank Malina); hosting of web sites developed by other groups or organizations (ie : Nicolas Schaffer); links to existing web sites developed by other organizations.

In 1999, OLATS launches a web site dedicated to Frank Malina (1912-1981). Two main raisons have lead to the selection of Frank Malina for the Pionniers & Pathbreakers project : it seemed necessary to establish a serious documentation that was not available about the founder of Leonardo ; but furthermore, it appeared crucial to document the work of a scientist, an artist and a man that is a model of a new category of artists, which is increasing today.

This site is under construction, the work should last about one year with regular updatings.

If you don't want to receive this information, send us a mail at <bureaud@altern.org> indicating your email address and we'll remove you from this list.

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< Summer course at CNMAT: Max/MSP Night School >

Max/MSP Night School
July 12-16, 1999
7:00-10:30 PM
CNMAT
1750 Arch Street
Berkeley, CA 94709

Instructors: David Zicarelli, David Wessel, Adrian Freed, Matthew Wright, Richard Dudas, and Leslie Stuck

Course Fee: $250.00 payable in advance or at the first meeting.

Reservations: <richard@cnmat.berkeley.edu>
(510) 643-9990 x300

This intensive week of evening classes features instruction in Max/MSP programming by its developer David Zicarelli and a cast of highly experienced Max/MSP programmers. The course will focus on developing MSP-based electroacoustic instrumentation in which Max provides flexible control and interactivity.

In addition to the standard set of Max/MSP objects, this year's night school will include CNMAT objects for analysis-based additive synthesis as well as resonance-based synthesis. The instructors will also demonstrate their most recent work with Max/MSP.

The class will address the topic of managing complexity in larger projects. The special challenges and techniques of building Max/MSP programs for reliable concert performance will also be discussed.

For more info, see our web page:
<http://cnmat.CNMAT.Berkeley.EDU/Calendar/Max_MSP.html>.

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< New Book on Psychoacoustics and Computer Music >

Music, Cognition, and Computerized Sound An Introduction to Psychoacoustics
by Perry R. Cook (ed.)
the MIT Press, March 1999
ISBN 0-262-03256-2, 392 pp., 174 illus.
$60.00 (cloth, with CD included)

How hearing works and how the brain processes sounds entering the ear to provide the listener with useful information are of great interest to psychologists, cognitive scientists, and musicians. However, while a number of books have concentrated on individual aspects of this field, known as psychoacoustics, there has been no comprehensive introductory coverage of the multiple topics encompassed under the term. Music, Cognition, and Computerized Sound is the first book to provide that coverage, and it does so via a unique and useful approach.

The book begins with introductory chapters on the basic physiology and functions of the ear and auditory sections of the brain, then proceeds to discuss numerous topics associated with the study of psychoacoustics, including cognitive psychology and the physics of sound. The book has a particular emphasis on music and computerized sound. An accompanying audio CD includes many sound examples, and source code to help explicate the text. The book also includes suggested lab exercises and test questions.

The contributing authors include John Chowning, Perry R. Cook, Brent Gillespie, Daniel J. Levitin, Max Mathews, John Pierce, and Roger Shepard.

Comments from Professionals in the Field:

"This volume spendidly meets the need for an up-to- date introduction to musical psychoacoustics in a collection of wide-ranging chapters by some of the most distinguished scholars in the field. I recommend it highly as a text and reference for undergraduates, graduate students, and professionals." Fred Lerdahl, Fritz Reiner Professor of Music, Columbia University.

"This collection of well-written chapters introduces readers to a range of current findings from musical acoustics, physical acoustics, and psychological experiments. The text is easy to read, and ideal for undergraduate and graduate students from varying disciplines." Caroline Palmer, Dept. of Psychology, Ohio State University.

"A welcome and valuable teaching resource. Oriented toward classroom teaching, the book presents topics in an accessible, engaging style. The breath of coverage is greater than that typically found in a single volume and provides an excellent introduction to the rich diversity of the field." Lola L. Cuddy, Professor of Psychology, Queen's University at Kingston, Canada.

"This volume provides a fine, readable introduction to many topics related to music perception and computer music in a way that neatly complements other current texts. Written in a fresh, approachable style, but having significant scholarly depth, it will prove useful both as a textbook and for individuals interested in this burgeoning field of research." Richard Ashley, Department of Music, Northwestern University.

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< Call for Entries : Sydney, Australia >

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URL: <http://www.ozemail.com.au/~sinsite>

dLux media arts

CALL FOR ENTRIES

D.ART 99 - Sydney Australia

CLOSING DATE EXTENDED: 16 APRIL 1999

D.art, dLux media arts' acclaimed annual event, is Australia's premier showcase of inter/national experimental digital film, digital video, cd-rom and computer animation art.

D.art will once again screen to capacity audiences at the prestigious Sydney Film Festival in June. The program will then tour inter/nationally. D.art 99 will also feature a forum on topical issues in digital media arts.

CONDITIONS OF ENTRY

* CRITERIA
- entry open to all Australian and international screen artists
- works should be innovative/experimental (non-narrative)
- works must have been produced either entirely or primarily within the digital domain, or, in the case of video and film (S8, 16mm, 35mm), involve some digital prod/manipulation
- works must have been completed within 1998/99)
- works should be a maximum of 10 minutes duration (does not apply to cd-roms)

* ENTRY FEE
AUD25 - or free to current members of dLux media arts (support screen arts, join dLux now! AUS$30).
Method of payment:
- overseas entries: international bank cheque only in AUS dollars;
- Australian entries: personal cheque, bank cheque or money order.

* ARTIST'S FEE
- artists whose work is selected for exhibition will be paid a once only fee of AUD250.

* FORMATS
Please submit preview tape/s in ONE of the following formats:
- SP Betacam PAL only, or
- high-grade VHS PAL, or
- high-grade VHS NTSC
- cd-rom, Mac or PC (must contain all necesary operating files)

* CLOSING DATE FOR ENTRIES
- 16 April 1999

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< COMTEC art '99 Dresden >

COMTEC art '99 office
Medien und Kulturzentrum Pentacon
Schandauer Str. 64, D - 01277 Dresden, Germany
Tel./Fax: 0049 551/340 00 33,
eMail: <Meidol@body-bytes.de>
URL <http://www.body-bytes.de>

The Culture Office of Dresden, capital of Saxony, is organizing the third media art festival COMTEC art. The internationally advertised festival sees itself as a platform to present and discuss media art projects. COMTEC art explores cultural chances and risks of 'cybernatisation' and the attendant changes in perception. The festival will focus on the interaction of human mental-body and digitally mediated communication. COMTEC art is accompanied by performances, workshops and a symposium.

The Festival/exhibition for computer aided art will be held from December 16th 1999 - January 30th 2000. The competition with an

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endowment of DM 20 000 comprises internet projects, computer animation, computer graphics and music, audio-visual compositions, performances and installations. Performances, concepts, texts and experiments will be included in accompanying events and publications. All of the selected projects will be documented in the COMTEC art '99-catalog and in the internet. Address your submissions and any questions to the above address.

140 artists from four continents applied for COMTEC art '98. An international jury selected 40 projects for a presentation at COMTEC art. Prize winners of COMTEC art '98 were: Norie Neumark, Australia (interactive CD-ROM); Joseph Hyde, GB (audiovisual composition); Mir Ali Hassanzadeh, Iran (computer aided installation); Francesca da Rimini and Michael Grimm, Australia (Internet); Phillip Hirsch, Germany (computer animation). Within the computer fair COMTEC 15 000 visitors could inform themselves about the latest media art.

COMTEC art '99 is, like the previous festivals financed by contributions from the public sector and by private sponsors and donators. Therefore I want to kindly ask you to publish an article and/or the following advertisement without fee.

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