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< This issue >

                              Craig Harris

This issue of Leonardo Electronic Almanac includes a profile of
SITE Santa Fe, a new and evolving World Wide Web site that informs
visitors about the work of several artists, and documents a
lecture series and group of performances. A diverse collection of
artists are represented, and the site is worth visiting from time
to time as more material becomes available at the site.

Curtis Karnow presents an essay that addresses patent, trademark
and copyright issues as they relate to creating works in
multimedia and on the internet. It is clear from this piece that
many of the terms by which these legal issues have been determined
in the past are no longer applicable without substantial revision
or reinterpretation. Karnow's essay helps to isolate some key
issues that need consideration.

Leonardo Digital Reviews presents a group of exhibit and book
reviews, and there are a series of opportunities that may be of
interest to LEA readers. A last call for participation in the
EDUGRAPHICS '95 and COMPUGRAPHICS '95 events in Portugal requires
immediate action for those who wish to contribute.

I am happy to have received fabulous feedback from last month's
LEA. I couldn't have done it without the contributions from people
who are doing interesting work, so keep that material coming in!
That is what makes LEA work.

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< Longing and Belonging: From the Faraway Nearby >

Bruce W. Ferguson
SITE Santa Fe
PO 10190
Santa Fe, New Mexico 87504 United States
Email: SITESantaFe@nets.com
URL: http://www.nets.com/sitesantafe.html

July 14 through October 15, 1995

Produced by:
Arts of Revolution and Pi in the Sky Productions
Morgan Thomas: morganth@nets.com

On July 14, 1995, Longing and Belonging: From The Faraway Nearby
will open in Santa Fe's Museum of Fine Arts and in a renovated
warehouse a few miles from the Museum. The inaugural exhibition of
a two-year-old, non-profit organization called SITE Santa Fe
addresses the rapidly changing relationships -- as expressed in
contemporary art -- among individuals, communities, and global
networks and institutions. Together, the two installations include
works by thirty artists from thirteen countries, and performances
by artists Robert Ashley, Rebecca Belmore, and Marina Abramovic,
plus a film program by Vietnamese-American artist Trinh T. Minh-ha
will accompany the exhibition.

SITE Santa Fe was formed in 1993 by a group of individuals of both local and national prominence interested in this city's unique cultures, histories and its role as a center for the visual arts. The organization's mandate is to contribute to the cultural life of Santa Fe by providing another platform for the consideration of developments in contemporary art and their relationships to existing art settings.

A related symposium, "The Place Of Place," is set for September 14-17, 1995, at the College of Santa Fe. Symposium participants will address the shifting contours of personal and cultural identities as they are affected by place. The connotations of the word "place" in this context transcend the ordinary use of the word, which is becoming obsolete. In an increasingly complex global culture, the understanding of place expands to include physical or social environments, sites on the information media web, and realms of memory, or even of the imagination. As the meaning of place changes, so do the ways in which we long for or belong to a place. This subject is of tremendous relevance to residents of Santa Fe. In the face of dramatic demographic changes, images of the city and its future, indeed of its essential character, are central to its political, cultural, and economic development.

Participating artists are from countries as varied as Brazil, Germany, and China. Fifteen are women; five are native Spanish speakers, and two are North American First Peoples. Meridel Rubenstein and Bruce Nauman, two long-time residents of New Mexico, have been invited to produce new works. As curator for the exhibition, I chose the participants because of the nature of their work in relation to this theme, and because I felt they understood and were sympathetic to being part of an international show set in a regional context.

Seven months before the exhibition, guest speakers began a series of lectures on related themes. In cooperation with the Friends of Contemporary Art at the Museum of Fine Arts, international curators Dan Cameron, Lars Nittve, and Catherine David (director of Germany's prestigious Documenta exhibition) spoke on the subject of international exhibitions in smaller locations. The series continued with Catherine de Zegher, Rasheed Araeen, Griselda Pollock, and David Spurr. Pollock and Spurr spoke on the relationship between tourism and art in the modernist period, a subject of continuing relevance to this region.

SITE Santa Fe has developed working partnerships in the community with the Museum of New Mexico's Museum of Fine Arts, the College of Santa Fe, the University of New Mexico, and other smaller community groups. SITE Santa Fe shared the first research visit of Ojibwa performance and multimedia artist Rebecca Belmore with The Institute of American Indian Art, and is working similarly with the Las Trampas Institute (an artists' workshop in Northern New Mexico run by Shelly Horton-Trippe) regarding Anish Kapoor's visit in the summer.

SITE Santa Fe's professional staff includes Jodi Carson, Vincent Varga, and me. The staff has a long collective history of museum and exhibition curatorial experience, as well as a highly developed awareness of the importance of cultural diversity, gained through experience in teaching and museum education programs. In addition, educational consultants have been retained to work with the Museum of Fine Arts to develop introductory presentations, walk-through tours, and brochures, to make the exhibition and related events intimate, accessible, and

educational.

The exhibition and symposium are set apart from similar efforts of this size, such as the Whitney Biennial or the Carnegie International, which are burdened by institutional restraints or mandates, or, as in the case of Charleston's Spoleto Festival exhibition, are one-time events. SITE Santa Fe is attempting to maintain a more flexible administrative model of an organization without a collection that is free to organize exhibitions responding to the pressing issues in contemporary art.

Longing and Belonging is only the first manifestation of this group's desire.The board hopes to show fine art from outside the region in a concentrated format every few years, and to provide a context in which debates about the nature and importance of contemporary art, local and otherwise, will emerge and enrich the entire community.

Some of the artists participating in this project are represented below:

Chema Alvargonzales
Chema Alvargonzales was born in Spain and now lives in Berlin. He studied multimedia painting and contemporary imaging processes from 1985-1988 in Barcelona. From 1989 to 1993 he studied in Berlin, completing his masters' courses with Rebecca Horn. He has shown in individual and group shows in Barcelona and Berlin since 1985. Alvargonzales works his evocative site-specific installation pieces in multimedia that emphasize light and sound.

Berlin, the artists' adopted city, has been his subject and the occasion for his pieces since 1989. Most of his pieces are organized around a particular building or district. Using neon light and hidden acoustic tapes to draw attention to the fluctuating historical and contemporary realities of the city, the artist exploits the typically urban media of bright lights and noise to literally highlight the "declaration of time" as a historical factor and a factor of individual experience. Using notions of "absence" and "presence", for example, he addresses issues surrounding surges and lapses of collective and personal memory, social visibility and invisibility, and what in our environment we chose to see and what we chose to ignore. Other works focus on more conceptual, abstract themes, such as the representation of physical place in context of geography and the imagination or the phrase "I love you".

Barbara Bloom
Barbara Bloom lives in New York and Berlin. Since 1974, she has exhibited in solo and group shows throughout Europe, the United States and Canada. Bloom works her detailed installation pieces in elaborate permutations of decorative art pieces, furniture and household goods, and fashion accessories and includes adjunct concerns such as the manufacturing processes of such things. To accompany her works, and as a comment on the art media, she creates and designs her own books.

Using themes such as narcissism, voyeurism, sin and junk as starting points, Barbara Bloom creates very elegant and highly rarefied 'environments' of things to raise questions about mass culture and its discontents. Bloom's particular concern is information overload and its effect on the individual: "We live in a culture that is suffering under such a deluge of information that we have trouble differentiating between the real and not real." She sees it her responsibility as an artist to create a

relationship with her audience that sharpens its skills to react to the excess of information and association depicted or implied by things. As much a researcher as an artist, she has been praised for the serious questions of history, media manipulation, gender confusion, and gender vision that lurk below the eerie, seductive beauty of the aesthetic surface of her work.

Gary Hill
Gary Hill lives in Seattle Washington. He was trained as a sculptor at the Art Students League in Woodstock, New York, and he has been working with video for over 20 years. During this time, he has exhibited both solo and group shows widely and has received many awards and grants. He produces videotapes and uses them in multimedia video/sound installations.

Gary Hill has succeeded in bringing a medium that has often been dismissed as peripheral to the artistic mainstream to create artwork of beauty and profundity. Some of his works require the interactive participation of the audience; all of them demand entrance into a complex relation among image, text, and sound. Using the philosophical concepts expressed through technology as a departure for his fascination with the relationship between image and language, Hill questions "the priviledged place that image, or for that matter sight, holds on our consciousness." His installations can be seen as elaborate multi-layered puns that resonate in the perceptual dimensions of sight, sound, and space and address standard notions of individuality and subjectivity. He writes his own texts to be part of the aural poetic experience of the works, and also has written texts for publication. Hill has been considered "one of the most important artists of his generation."

Rebecca Horn
Rebecca Horn was born in Germany in 1944 and studied art at the Akademie der Kunste in Hamburg and also at St. Martin's School of Art in London. She has taught at the University of San Diego, the California Institute of the Arts and is at present Professor of Art in Berlin. She is the youngest woman to show in Documeta and won the Documenta Preis in 1986 in Kassel and the Carnegie Prize at the Carnegie International in Pittsburgh in 1988. She has shown extensively in the United States and Europe and has been in all of the major biennales worldwide including Sydney, Australia. In 1993 Horn's work was the subject of a major retrospective at the Solomon Guggenheim Museum, New York, both uptown and downtown.

Horn's poetic machines which act spastically to create psychological tension include every media imaginable from electrically spitting copper snakes to kissing aluminum hammers to body sculptures with extended unicorn breasts to dancing tables and feathered fingers. Horn works like a contemporary alchemist, mixing natural materials precariously balanced against sly mechanical objects. And she makes films, firstly short films as "performance" pieces but gradually working up to major feature length works like La Ferdinanda or Buster's Bedroom which features Donald Sutherland and Geraldine Chaplin. There is an erotics to her work and a metaphorics involving the body, the machine and natural materials, all changed to produce new visions and new responses: poetic automatons.

Lorna Simpson
Lorna Simpson's artistic career has been distinguished by 'firsts', first African American woman artist to represent the United States at the Venice Biennale, and the first to have a one-person exhibition in the Projects Room of the Museum of Modern

Art. Since 1985, Simpson's conceptual photography has been shown at major arts institutions nationally and internationally. It is included in many public collections like those of the Museum of Modern Art, New York, The Whitney Museum of American Art and the Corcoran Gallery in Washington.

Using stark images with word sequences and text fragments, Simpson questions notions of self-identity while simultaneously recovering cultural identity from existingstereotypess. Focusing her interest on issues surrounding her female African-American identity, Simpson's spare images direct attention to individuality, choice and freedom as they are subject to racial and gender assumptions. She juxtaposes image and text to challenge and redefine the cultural and historical notions that have served to fix social meanings. "I am interested in playing with the viewer's perception of photography and in meanings that can change after a second look". More recently, she has worked in multimedia installations and environments.

Pierrick Sorin
Pierrick Sorin is a French video artist. His first audio-visual investigations began in 1972 at the age of twelve. With the help of the family camera, Pierrick became mesmerized with the "magic" of cinema. For the artist, the fascination with the medium comes from the de-construction and then re-construction of reality in the process of filming and then projecting. Many of his films, while seemingly simple at first, are short peculiar narratives about his individual reality that strike a universa
l chord. "C'est mignon tout ca" is a short film about a man who upon seeing himself through a video aid becomes excited at the sight while at the same time lamenting his introversion.

Until 1989 Sorin filmed with a super 8 video camera preferring the rudimentary qualities related to that camera. In 1989 Pierrick discovered that the video camera vas more adaptable to his work, it opened up the field of installation. Using several monitors he was able to create pieces which concurrently question the look and the object. He uses the medium in an interactive way with the audience. In his piece "La bell peinture est ..." (The pretty painting is behind us), the viewer looks through a black box which has the viewer's image in profile, on a second box the individual faces himself and asks himself to move out of the way because he is looking at the painting on the wall, which is in fact behind him. Sorin's video installations use several monitors allowing the artist to elaborate on a form of representation closer to the actual function of perception. The artist describes his interest in audio-visual expression as a means to present a mixture of genres. "The artist who works in this medium, without being a specialist of any field, is at once a photographer, writer, choreographer, musician, sculptor...or maybe he is none of these yet. An individual, in short, who expresses a sensibility which does not correspond to any established categories of creative activity. He is in the open field of poetic contemporary elaboration."

Felix Gonzalez-Torres
Felix Gonzalez-Torres was born in Cuba and lives in New York City. Since 1987, he has exhibited in numerous solo and group exhibitions in the U.S. and Europe and has received many awards and grants. Gonzalez-Torres manipulates and sometimes combines aspects of the traditional fine art mediums and performance art in his multimedia pieces.

Using immense quantities of materials, such as stacks of

commercial prints, piles of individually wrapped candies, or
strings of lights, Felix Gonzalez-Torres exploits the evocative
power of the mundane and the minute to comment upon the enormity
of AIDS, love, death, and loss. He informs both his consumable and
nonconsumable sculptures with a minimalist aesthetic that uneasily
conflates formal asceticism with an excess of removeable pieces.
In his site-specific billboard works, Gonzalez-Torres uses this
conventionally public medium to display intimate details of,
ultimately, everyone's personal life. The artist explains that by
"taking a little bit of information and displaying this
information in absolutely ironic and illogical meetings" he hopes
to reveal the real meaning of issues. He plays on the conceptual
associations that tie unrelated facts like candy and AIDS
together, an aspect of his work that becomes more meaningful in
view of the fact that most of his pieces are physically ephemeral
and destined to be depleted.
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< Molten Media and The Infiltration of The Law >
Curtis E.A. Karnow
Email: karnow@cup.portal.com

The legal system infiltrates technology, like a thin mist seeping
under the door, staining it and turning technology into a
different animal. Programmers wonder if the code they write was
patented by someone else. Graphics loose their innocence, and look
like trademarks, trade names, and logos; they have that old "look
and feel" of someone else's product. Trademark law reaches out its
sticky hand to embrace color, sound, the overall appearance of
every product and packaging on the market. Copyright law hovers
like a specter, infecting every line of code, every data
structure, every animation, every sound, graphic and screen
layout.

And while this law spreads, it thins out, too. The types of
properties that the law protects now were unknown just a few
decades ago. There is an unreality to the transient audio visual
image, an insubstantiality to a user interface. There is something
very peculiar about patenting a three dimensional cursor or a
software retrieval system. Surely these are created things, to be
protected from theft, but most judges are reluctant to tread too
heavily here. These judges remember "property" as tangible land,
gold, cattle; this new stuff looks ephemeral. Judges have a hard
time giving a user interface the same absolute, exclusive,
protection provided to a house, a car, or money.

So the law expands its reach to govern the development of advanced
technologies, but at the same time its touch grows more hesitant
and uncertain. It is like an omnipotent Imperium in nominal
control of vast territories - every movement of the inhabitants
may be the subject of Imperial decree, but none knows which
actions, precisely, will invoke the Imperial attention.

This note discusses the apparent paradox of comprehensive but
uncertain protection for intellectual property, and the
consequences for companies engaged in high tech development.

Intellectual Property: A Spectrum of Protection

Imagine two kinds of creation. One covers highly creative works:

the bizarre, the remarkable, the arbitrary, the unexpected, the
lights of fancy and fancy footwork, the stuff that can only spring
unbidden from the human mind. And then the opposite: facts, pieces
of the natural world, the stuff we find all about us: grains of
sand, oxygen, rocks, the patrimony of us all.

Now, the law protects the new and artificial by granting the
creator a monopoly: no one else can use or have the creation. By
contrast, the public and natural domains are for everyone. Copy a
painting or reproduce a book, and go to jail (or worse: get sued).
But take a picture of a rock or leaf, or make an imitation of the
night sky, and you will be left in peace. Invent the integrated
circuit chip, or the process by which rubber is vulcanized, and
get a patent; but if one comes up with a new algorithm or
discovers a physical law, no protection is available for the
discovery and everyone can use it.

In truth, there are not two types as much as two ends of a
spectrum. Some work is plainly and dully derivative or duplicative
of physical reality; and so this secures little protection from
the law. Other work is stunningly unexpected, re-defining a field
or creating an industry, and that is strongly protected.

Trademark law participates in this spectrum of creativity.
Powerfully novel terms are strongly protected, and weaker ones
less so. So, for example, arbitrary words like Exxon and Kodak are
given great deference by the courts; and generic terms -- those
which are the most descriptive, most closely and obviously allied
with the physical and natural worlds -- are given little weight
and are difficult to enforce. Phrases such as The Hot Dog House,
Aviation Services, and Drawing Program are useless as trademarks
for the goods and services they describe. But, of course, one can
be arbitrary with natural things: Just as a new collage can be
made of wood and paper, so too a good trademark can be -- Apple.
Or Virgin Airlines.

Patent law has analogous rules, such a the doctrine of equivalents
and the so-called "means plus function" test. Both of these can
broaden or narrow the effective scope of claims in a patent. Both
doctrines try to discern the difference between a truly new
invention which deserves a patent, and the insubstantial variation
on an older invention which deserves no protection; indeed, these
"insubstantial variations" would be an illegal transgression on
the old patent.

Copyright law lies on the spectrum as well. Factual compendia,
like telephone listings, are very hard to protect. Depictions as
to which there is very little choice or creativity - such as
showing a pipeline on topographical map -- secure very little
protection, or none. Creations whose structure is dictated by
physical requirements or standards are difficult to protect. For
example, computer code that issues obvious and necessary calls to
peripheral systems, or polls input devices, is not easily
protected: these works are a direct function of the physical
contexts, and so share in the very weak -- if any -- protection we
give to asserted rights in the real, physical world. Anyone can
use them.

Normally, anything that is substantially similar to the original
is enough for copyright liability. Substantial similarity catches
a lot of rough approximations -- it provides a thick shield around
the original work. This then establishes powerful protection for
the original creation. Anything that comes close is an
infringement.

But where the original's originality is at a bare minimum and creativity at its lowest tide, the law provides nothing but thin protection. The new replicator will be punished only if he makes a virtually identical copy. When judges apply the 'virtual identical' test, very small differences -- just a little morph or tweak -- will be enough to distinguish the new work away from the original; and that will insulate the new work from legal attack.

The law usually has had little trouble applying this spectrum of creativity, because it has been simple to distinguish the endpoints. At the one end we have the common, universal natural, factual, historical, physical background [that's weakly, thinly protected]; and at the other end, the artificial figments of the imagination, which are powerfully protected.

Molten Media

But our two endpoints are melting, and intersecting with each other. Nowhere is this conflation more apparent than in multimedia; and the same events will erupt shortly in the budding virtual reality industries.

Developing out of computer software, classical entertainment and video games, multimedia has begun to subsume other trades such as advertising, film, and publishing. The markets for multimedia productions are expanding rapidly, the cost of production -- authoring tools and CD ROM publication technology -- is dropping precipitously. Development tools are increasingly easier to use.

Distribution of multimedia productions is not as widespread as TV or indeed computers generally -- most PCs don't have CD ROM drives -- but those numbers are increasing dramatically. And Internet access {which is built into the next generation of PC operating systems such as Windows95 and IBM's OS/2 Warp} will further the spread of the product. This will be especially true with the advent of graphical Internet access, such as Mosaic, and developments such as Microsoft's Blackbird, the OLE-based tool which will allow Internet access to object-oriented compound documents with text, audio, and visual components.

Widespread distribution and ease of manufacture are important only when conjoined with one more element: digital production. Digital production implies that one product is easily morphed into another; it means that anything, originally digitally created or not, can in seconds be scanned, clipped and cropped into a new product. For the digital creator there is no difference, no difference at all, between creation and copying.

To be sure, we all stand on the shoulders of giants; we legitimately use ideas and raw material from our surroundings and our history. But before digital production, that raw material was filtered through the imagination of the mind -- which in a sense made it the property of the new creator -- before it was used in the new product. Even if inspired directly by an old painting, or hearing an old poem or reading an old play, the new creator would first abstract the old item, and apply some minimal amount of new mental energy before the new work issued forth. So the new "copy" was in fact different from the original, and encompassed new creativity.

Now the literal replication can happen first, without the intervention of abstraction, without new creative processes. Digital replication is, by definition, exactly like the original.

Now, we're not just standing on the shoulders of giants – we're using their legs to walk, as it were. The new means of production create enormous copyright problems.

So too the new means of transmission: passing a book around from hand to hand is innocent, and violates no-one's rights. But multiple browses through a text file creates a series of copies, and may violate the copyright law, just as a series of passes through a networked multimedia database probably generates a series of "performances" of a work which may not be authorized.

The Reach to Reality

Increasingly, the world that lies behind and supports our creativity is a synthetic world. Our social and business environments are, increasingly, electronic worlds. Advertising, publishing, politics and our very day-to-day life increasingly quote the electronic worlds of T.V., film, and video games. The encroachment of terms such as cyberspace, virtual reality, and networks all point to the gradual displacement of the so-called natural world by the digitized fabricated creations of humans.

> Someday soon, online computing will be the sea we all swim in, and when that happens, it will be the fish – the colorful, complex organisms we are beginning to call "content" – that matter most.1

Indeed, the only "fish" will be electric ones; but unlike real ones, someone owns them.

In this new world, fidelity to reality takes on a very peculiar twist. The sound of real gunshots is too tame; we need fabricated sounds that everyone who watches action films will recognize as 'real'. References to social reality are incomplete without citations to popular T.V. shows and movies, every one of which is the subject of copyright and trademark law. The holy grail of increasing realism is aided and abetted by the movement of our day-to-day reality towards the electronic realm: reality is electrified, and electronic reality becomes more vivid, more tangible, more visceral, more -- real. The "culture becomes simulation".2

This is the description of a conflation, a collapse of two realms. And the legal world is not immune. These developments wash out the spectrum that distinguished the protected innovation -- the valued, novel, new, creative invention -- from the unprotected fabric of physical reality. The fusion of the real and electronic worlds destroys the frames, the contexts, the signals by which we judge whether something is true or false, real or imaginary, a joke or serious.

For example, the interface for a virtual reality battlefield simulation and a real Abrams tank -- the kind that actually kills -- is about the same. The difference between news and advertisements is very thin in the well-done infomercial. A "realistic" space wargame is more likely to rely on fidelity to Star Wars and Star Trek than NASA's ungainly contraptions. And a 'realistic' car race game through downtown New York needs to show the signs and products and buildings – every one of which is trademarked and copyrighted and – for all we know- the subject of a design patent.

The new electronic reality from which we derive our inspiration and raw materials is a minefield of proprietary rights. It's as if

God copyrighted the universe.

Owning Reality

Who does own the chunks of our routine electronic world? And how
strong is the protection? Can the terms WINDOWS and INTERNET be
trademarked? Can a three-dimensional pointer really be patented?
Can Lotus really copyright the basic spreadsheet design and
interface? Can I stop others from cutting and pasting my posting
on electronic bulletin boards?

Suppose I create a three-dimensional orange with Sense8's virtual
reality development tools. The orange is complete with density,
shape, surface resilience, pitted surfaces, and sound files
clipped from a software package {for that schhhhlerip sound of an
orange squeezed}, using textures scanned in from a Life magazine
photograph. The orange floats there, visible, tangible, as real as
real, indistinguishable in a electronic realm from a real orange;
as real as rocks and air and stars.

Who owns the orange? Or do different people own different parts of
it? Can I give you a copy? Can I sue someone who takes the orange
code to incorporate it in another environment?

There is no part of this virtual orange that is not subject of
legal claims. Separately, the code, the structure of the code,
perhaps the data file structures, the sound and image bit-mapped
files, are all copyrightable; patent law might cover some portion
of the code, and certainly some portion of the authoring tools and
display hardware; and who knows, perhaps some company -- Orange
Julius? -- will bitterly complain that its trademark is being
taken in vain, diluted in its worth if not with water.

The law will indeed find enforceable rights in these contexts. But
we do not know which end of the spectrum of protection will
predominate. The courts may find these chunks of the electronic
world deserving only of thin, weak protection, which would allow a
relatively high degree of freedom in the uses to which these
properties are put by others. Or the courts may invoke strong
protection, severely restricting use by others.

Because the environment is an artifice, so the legal system claims
a controlling interest. But as it does so, these legal doctrines
of ownership begin to dissolve in uncertainty. At the same time,
the legal system itself -- the mechanism of decision - - has
become clumsy and intolerably expensive. And as the legal system
unravels, it threatens to take the electronic world -- our world -
- with it.

The Infirm Law

No one usually gets to trial within a year; and getting there can
be stunningly expensive: routine motions can cost $15,000; many
experts charge $300-400 an hour; lawyers at i.e. $290 an hour can
spend days traveling, preparing for and taking a long series of
sworn statements (depositions). It add up, quickly. Many cases
involving intellectual property are brought in state courts, under
the guise of state law; but the state courts in the major
metropolitan areas are grossly over-worked, under funded,3 and
rarely staffed with judges familiar with advanced technology
(there are exceptions). In some states, it can take four years and
more to get to trial.

Intellectual property litigation takes a long time, it is

unpredictable, and it is ferociously expensive. This is just the sort of activity that can quickly kill off the small advanced technology company. It is the land of the Pyrrhic victory: one may be innocent of infringement, but it will cost $350,000 to defend the suit. No wonder that less than 5% of cases get to trial. The rest, if not dismissed after extensive evidence-taking and motions, are settled. The terms of those settlements reflect less about the merits of the suit, and more the realities of the time and expenses of litigation.

Litigation here is an assault weapon. Fear of litigation deters the new creators, artificially expanding the effective monopoly power of older intellectual property.

We have then a potent combination: An infirm legal system ramifying throughout the digital reality that envelops us. We have bred an artificial bacillus that proliferates well in the synthetic reality.

Conclusions: Climbing Out Of The Legal Pit

The explosion of the digital context takes the concept of property, an integral aspect of creation and invention, and ramifies the notion of "property" throughout the mundane electronic world. This invocation of "property" inevitably brings with it the baggage of a hobbled, under-funded and heavy handed legal system. Every virtual gesture, each read and write to data, each poke and peek, each shift in the electronic world teems with legal implications. Those implications are complicated and ambiguous because the legal system, as a whole, is splintered.

Fundamentally, the effect is stultifying.

Reforming the legal system would help. Funding the courts at acceptable levels, increasing the quality and quantity of judges would cut down on the interminable delays and consequent uncertainties. The legal system would do better with more judges with the courage to swiftly and effectively punish those who abuse procedures, judges who no longer think of a lawsuit as simply a sophisticated game. Clarifying and simplifying the controlling statutes would help, too, of course.

But those are long term goals; civil justice reform is a long, slow, grinding process.

In the meantime, the manipulators of high technology need a way to navigate out of the miasma of law.

To do so, one must by-pass the courts, and their attendant pre-trial procedures. So-called alternative dispute resolution mechanisms, including private arbitration and mediation services, are increasingly available. The World Intellectual Property Organization provides arbitrators skilled in intellectual property, and agencies such as the American Arbitration Association can provide the expertise as well. Too, new groups are springing up designed to provide these alternatives to specific industries such as multimedia companies.

In each case, these alternative procedures require us not to reach for the heavy weapons; to leave the formal legal process alone. That is not always a temptation that can be resisted.

Underlying the resort to the formal legal system is the unspoken notion that all injury must be redressable. We are quick to

perceive affront, and quick to insist on the perceived "right" to
sue. In the manmade domain of the electronic sphere, there are,
surely, no accidents, no forces of nature: human fault surely must
underpin every indignity. It is tempting to think so, for if no
human is at fault-- then what is the cause?

But not every injury should be the subject of suit. Accidents and
other events beyond the intent of humans happen in the natural
world; and no one, we hope, sues for those. As we complete our
movement from citizens of the natural, to the mechanical and now
the electronic worlds, so too may we begin to see the events in
the electronic domain as beyond the reach of the law. We may begin
to see the electronic world as "owned" by all of us; we may come
to see the design of new works as dictated by the public
requirements and standards of virtual worlds, and therefore
relatively safe from legal attack. We may come to think of objects
in cyberspace as the patrimony of us all. That, more than anything
else, will loose the bonds of an awkward and ailing legal system,
and allow creativity the freedom it needs to copy from its
environment.

Bio

Curtis Karnow 1995. Partner, Landels, Ripley & Diamond, and chair
of the firm's Communications and Technology Group. His practice
emphasizes intellectual property litigation, high technology and
computer law. Mr. Karnow is a faculty member with the American
Arbitration Association, a former federal prosecutor, and serves
as temporary judge with various Bay Area courts.

Notes
1. Charles Jennings, co-founder of the Oregon Multimedia Alliance,
in "Some Brief Glimpses at the Online Future" by David Batterson
<dbatterson@ATTMAIL.COM>(internet download).

2. Andy Darley, "From Abstraction to Simulation: Notes On The
History of Computer Imaging," Culture, Technology & Creativity
(London, ed. P. Hayward).

3. For example, the judiciary in California -- the third branch of
government -- secures about 2% of the state's budget.
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        |  LEONARDO DIGITAL REVIEWS  |
        |        JUNE    1995        |
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Curtis Karnow, Jose Elguero, Youry Nazarov, Irina Presnetsova,
Will Marchant
===
< Book Review: Cassette Culture, by Peter Manuel >
Reviewed by Gerald Hartnett
Email: GHARTNETT@EAGLE.WESLEYAN.EDU

Cassette Culture.
By Peter Manuel.
The University of Chicago
Press, 1993. xix, 302 pp., appendices, bibliography, glossary,
index.

As an academic discipline, Ethnomusicology remains surprisingly
unaffected by the critiques of authorial presence that 10 years
ago brought about dramatic upheavals in Anthropology and
Ethnography proper. While the reasons why it did not are complex
and themselves in need of scholarly attention, it makes sense to
pay close attention to the occasional Ethnomusicological work that
confronts head on the discipline's tendency to reduce an "other"
culture to a quantifiable set of differences to be shelved amid
volumes dedicated to primate studies and strange attractors.

Peter Manuel's copious study of cassette-based music in north
India, "Cassette Culture", endeavors to do just that. Its writing
is grounded in old-fashioned materialism, politicized in the
service of generating emancipatory consciousness, and sensitive to
critical advances originating far afield from musicological
scholarship. Manuel is up front about ethnography's perilous
historical relation to colonialism--and this sensitivity to
context legitimates Manuel's attempt to have it both ways, i.e.,
to treat the widespread social and cultural ramifications of
audiocassette technology's incursion into Indian life as a
quantifiable entity and as an activist discourse.

In fact, technology is in the foreground throughout, and Cassette
Culture contains an extremely valuable historical account of
cultural production under the influence of media technologies
(phonograph, film, audio cassette) and the recording industry. The
phonograph's ability to mass-produce recordings altered musical
content. The "ghazal" and "qawwali", two traditional musical forms
associated with classical Hindi and Urdu culture, achieved
prominence during the early decades (1910s to 1930s) of the
British-owned recording companies' technological monopoly on
production and distribution for clear reasons: their calculated
commercial success stemmed from a pan-regional appeal arrived at
by removing improvisational elements from the music while
introducing western pop rhythms and instrumentation. Thus, an
industrialized reduction of traditional musical forms achieved
commodity status during a time when an expanding bourgeois
phonograph-owning audience made possible the growth of a monopoly
recording industry catering to, and in some ways creating, the
needs of its clientele.

By the 1930s, however, film soundtracks usurped other recorded
popular musical forms, becoming Indian pop music's "sine qua non"
for the next 40 years. The reason for film's natural seductiveness
in a country bearing an illiteracy rate of 65% may be obvious, but
several contributing factors to its appeal cited in "Cassette
Culture" are considerably less evident. For example, the book
argues that the film industry prospered in part because it offered
investment opportunities for indigenous Indian capital that, unlike
the post-colonial record industry, was unrestricted by government
regulation or private monopoly interests .

Ironically, film and music produced under these ostensibly more
desirable economic relations quickly grew sterile, generalized and
formulaic. Manuel wryly notes how the emplacement of "star" and
"spectacle" systems distracts attention from the material
impoverishment endured by most Indians (p.44), and careful

treatment is given to contentious issues regarding the meaning and use of film in its social context. One interesting section of the book follows divergent Indian viewpoints on film and film music's viability as mediators of a consciousness that is either feudal and false (as maintained by many Indian intellectuals), or desirably tradition-affirming (as evidenced by the cinema's astounding commercial success with the Indian public, with 15 million people attending films daily). Whichever the answer is, it is certain that as a result of film music's mass-produced condition that an identifiable mainstream style emerged, thriving at the expense of many folk genres that "have either disappeared or survived only by compromising with film culture" (p.55).

Enter the audiocassette. Manuel cites astronomical sales growth of pre-recorded tapes, from $1.2 million in 1980 to over $21 million by 1990 (p.62), while film soundtrack market share fell dramatically Relations between established recording companies and pirate cassette labels provide a glimpse into capitalism's proclivity for fashioning strange partnerships out of conflicting values and traditions. As cassettes enhanced the commercial viability of some marginalized song forms, they simultaneously detracted from the importance of live musical and ritual performance. One fascinating example cited is how recordings of Hindu priests supplanted the need for their physical presence during ceremonial functions (p.128).

While not hesitating to borrow conceptually from a variety of interdisciplinary writers (Enzensberger, Hall and Williams), their intellectual mobility isn't Manuel's stock in the trade. The occasional offhand observation reveals a voice of disciplinary membership. For example, a somewhat gratuitous jab is taken at film theorist Laura Mulvey that is reductive of Mulvey's arguments and their usefulness to scholars. One might also question the author's decision to not define how the cassette medium is "interactive," despite its repeated application in the early chapters, especially since it has come to be a widely misused term in much writing on technology.

These reservations notwithstanding, there is much here to admire. One of the book's best sections deals with complicated and contradictory gender issues in the folk tradition "rasiya", a song-based musical genre featuring the performance of women's roles by men, which enjoyed an enormous burst in popularity with the increased consumption of cassette- based music. Further, those sharing the author's ideological enthusiasm for Marxist economics and disdain for the mass media's over-determination of much 20th century cultural production in India (if not elsewhere) will find something to cheer in the chapter entitled "Cassettes and Sociopolitical Movements." Particularly noteworthy here is the only instance of pastiche (the cut and paste to which magnetic audiotape lends itself) mentioned in the entire book. This remarkable homemade cassette, which was copied and distributed widely throughout India to the disdain of Indira Ghandi's fascist-leaning Congress Party, utilized "sardonic monologue" and sampled popular song lyrics about inflation, corruption, sugar prices and Ghandi's alleged gender reassignment surgery (p.246).

"Cassette Culture" is a fascinating and painstakingly researched book that formulates complex responses to some difficult questions while avoiding obvious solutions. It tries to draw out to what extent cassette-based Indian popular music has been historically and economically determined by technological "advances" before and after cassettes, whether cassettes promoted diversity or the homogenous fare so often associated with products of mass culture,

and whether the availability of productive means to broader class
constituencies led to a more progressive model of music production
and distribution. As evidenced by the last several chapters, vital
folk music and oppositional foment evolved in Indian culture
partly due to the democratizing properties of a technology easily
lent to personalization. Perhaps its strongest feature,
nevertheless, is Manuel's methodical and detailed statement of
authorial motivation for writing the book; for this reason
"Cassette Culture" avoids many positivistic pretensions that
trouble ethnographic scholarship, and on the basis of
methodological candor alone it is recommendable to social
scientists of all ideological persuasions.
****
< Exhibit Review: Hershman and Savage >
Reviewed by Sonya Rapoport
Email: rapop@garnet.berkeley.edu

Lynn Hershman
Gallery Paule Anglim
14 Geary Street, San Francisco, CA
7 June - 1 July 1995

Adam Savage
Blasthaus
270 Second Street, San Francisco, CA
Through June 15

There are two big guns in town: Lynn Hershman's "America's Finest"
at the quintessential well-appointed San Francisco gallery Paule
Anglim; and Adam Savage's "The Convincer" at Blasthaus, a new
space that reflects the owners' multi-media design business in its
unusual layout and in presenting exclusively high-tech art.

At Paule Anglim's, contrasting the pristine installation that
encases Lynn Hershman's centrally positioned MIG rifle, the
message on its white walls reads "captive", "captured", and
"caption". The latter implies this is what becomes of us after we
are dead and gone. A mirrored box (hiding the computer) rests
beneath and provokes further reflection. Neatly embedded into the
back wall is a video camera which shoots an image of us as we pull
the trigger of the gun. This weapon looks like the real thing,
lock, stock and a barrel that was reconstructed to play videos of
battle scenes, bombs, soldiers, urban violence, and victims of
shootings. Some of the victims were mine when I, the aggressor,
soon to be victim, disappear, pull the trigger and appear shooting
in the macabre scenes. I could swivel the gun to point to the
"captive" and "captured" on the walls. These words then become
background captions for the translucent video images. All this
imaginatively conceived by Lynn Hershman and programmed by Paul
Tompkins! I was moved emotionally, however, by an unguentary voice
on a sound track repeating words and word phrases such as "don't
shoot", "squeeze the trigger", and "look at what you're doing". I
looked and felt I had the experience of being in a shooting
gallery of ideas.

While walking through Blasthaus space I spied another gun,
stunning, black and gleaming rifle, locked into a high swivel
stand of circular upright rods extending from a loop base. The
barrel, constructed of metallic tubes tied with a metallic belt,
supported a search light. At the end of the weapon's five feet
were boomerang-shaped triggers connected to a lever frame of
vertical rods. I couldn't resist caressing the sensually shiny
carapace. Is this real? or surreal? The label read "The M-1900 9
Barrel, liquid cooled, grenade launching, 75mm recoilless, fully

automatic gatling spinner with a floating breech. Fires Pyrac caseless ammo. Holds 200 rounds, belt compatible. Includes: 'Crowd Controller' Napalm/gloop/Me2 Flame-thrower; system integrated. Fully silenced underbellied Uzi 9mm 65 round sub-machine gun. SAS-Issued, 200-yard EM pulse-wave generator. Five full spectral scope arrangement; Infra, UV, gamma, X-ray, and smart laser tele-finder scope, plus an on-board, TRAK sys, vital organ identification system, maximum target selectivity." Need I say more about this plastic reconstructed found-object relic?

Other noteworthy Tech-Art in San Francisco: Bruce Cannon at Paule Anglim Rebecca Horn's "The Hydra-Forrest performing Oscar Wilde" at the San Francisco Museum of Modern Art
****
< Exhibit Review: Holograms at MIT Museum >
Reviewed by Roger Malina
Email: rmalina@cea.berkeley.edu

MIT Museum
Exhibits: Holography; From Louis Sullivan to SOM- Boston Grads go to Chicago; Math in 3D; Sailing ships to satellites- the transatlantic connection, Bill Parker plasma sculptures.
265 Massachusetts Ave, Cambridge, Mass 02139, USA
also: http://web.mit.edu/afs/athena/org/m/museum/www/museum.html

The main attraction at the MIT Museum is the display of holograms from the collection of the NY Museum of Holography. The MIT Museum acquired the bulk of the collection after the NY Museum closed. There are excellent holograms, well displayed, by many of the pioneers and others. These include holograms by artists such as Nic Phillips, Paula Dawson, Harriet Casdin Silver, Melissa Crenshaw, Margaret Benyon, Rudi Berkhout, Andy Pepper, John Kauffman, Sam Moree, Setsuko Ishii and others. It is many years since I have seen many of these holograms - and to my surprise and pleasure many of these holograms stand up very well. They speak quietly and eloquently - contemplative, poetic compared to all the hubbub of the current work in 3D media whether in virtual reality technologies or on the Web. If anything these holograms are too well displayed- almost clinically. I would have liked some inkling of the impassioned and chaotic, energetic and missionary context of the work of these artists. Holographic artists participated in invention of new techniques, of new displays, they struggled and struggle still to gain access to media that they feel will make real their visions. I wish there was more mess in this show!! A word of thanks however to the Museum for rescuing these holograms and for conserving them. Also on display are several plasma sculptures by Bill Parker.

The other displays left no impression on me - I am now so used to viewing virtual museums on the Web, and using hyperlinks to maneuver from foreground to background, that I found the geometric sculptures of Mortimer Bradley, Jr. and the historical photographs and architectural drawings rather frustrating in the other exhibits. The physical objects on display were not compelling enough in themselves - and I wanted to be able to "click" to move to background planes of additional information or other perspectives. I am beginning to think that the majority of physical artifacts that are shown in museums are better shown in virtual museums, on line. Real museums should be reserved for outstanding physical artifacts (The Brancusi show currently at the Pompidou Museum in Paris comes to mind) - and ideally one should be able to touch them!!
****
< Exhibition Review: Science and the Artist's Book >

Reviewed by Will Marchant
Email: marchant@netcom.com

Smithsonian Institution Libraries Exhibition Galleries
and Washington Project for the Arts
May -Nov, 1995

There are fourteen "Artist's Books" currently on display at the
Smithsonian. Some of the works in the exhibit might not be
described as "books" per se, but more as sculpture. Although three
dimensional effects are used in many of the items, they do not
seem to invoke a strong impulse for touch. Most books, by their
very nature, call out for thorough visual inspections, but mostly
from a single vantage point outside of the page. Many of these
works conjure the image of a sorcerer's apprentice freeing the
pages from books to wander the display cabinets. Others are more
conventionally "book-like" but with startling color or geometric
juxtapositions.

In 1974 Dr. Bern Dibner donated his collection of approximately
8,000 books and 1,600 groups of manuscripts to the Smithsonian to
establish the Dibner Library for research in the history of
science and technology. In the Book "Heralds of Science" Dr.
Dibner featured 200 books that had had a major impact on science
and technology. A group of artists were invited to select from the
Heralds texts an inspiration for a work for the new
Smithsonian/Washington Project for the Arts exhibit "Science and
the Artist's Book". Part one of the exhibit is at the Smithsonian
and Part two at the Washington Project for the Arts.

This exhibit is a "must see" for those fascinated by books. Part
one is housed in a tiny cul-de-sac in the bottom of the National
Museum of American History. Sadly, during one half hour of an
otherwise busy Saturday afternoon at the Smithsonian, no other
people stopped to examine this wonderful display.

Part one of the exhibit runs from May 26 to November 3, 1995 at
the National Museum of American History.
Part two consists of an additional 13 works and is on display at
the Washington Project for the Arts from May 26 to September 2,
1995.

For further information: A brochure is available at the exhibit.
The Smithsonian Institution Libraries Exhibition Gallery can be
reached at (202) 347-4813. Mr. William F. Powers reviewed the
exhibit on page H1 of the June 3rd, 1996 Washington Post. The
exhibit is displayed and discussed in the Smithsonian magazine
(June 1995, page 108).
****
< Reviewer's Bio: Michele Emmer >
Email: emmermve@unive.it

Michele Emmer was born in Milan, Italy, September 15, 1945. He is
currently professor of Mathematics at the University Ca' Foscari
in Venice, Italy. He received his degree in mathematics at the
University of Rome in 1970. He then worked at the University of
Ferrara, L'Aquila, Rome, Sassari, Viterbo, Venice. He has held
visiting positions at the universities of Paris, Sud Orsay,
Princeton, Barcelona and Campinas among others. Primary fields of
activity as mathematician include: minimal surfaces calculus of
variations, computer and education, symmetry and groups and
history of mathematics.

Professor Emmer is a filmmaker and has received several awards in

scientific film festivals. He also has been awarded honorary
membership in film festivals and is current president of the
Italian Association for Scientific Media, having realized 20
movies in the series "Art and Mathematics".

He has organized several exhibitions and conferences on art and
mathematics, such as one on M.C. Escher, and edited accompanying
books and papers on the same topics including "M.C. Escher: Art
and Science", published by North-Holland and "The Visual Mind"
from the MIT Press.

He is a member of the editorial board of Leonardo.
****
< Classified Advertisements >

ARTIST SEEKS VISUALLY CHALLENGED COLLABORATORS FOR ON-LINE ART
PROJECT Contact: goldring@mit.edu. Ongoing project initiated by
visually challenged artist has led to exciting new ideas for on
line art.
....
Your announcement could appear here, contact
davinci@uclink.berkeley.edu for more information.
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< End Leonardo Digital Reviews June 1995 >
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            |  ANNOUNCEMENTS   |
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< EDUGRAPHICS '95 and COMPUGRAPHICS '95 - Last Call >

Harold P. SANTO
Instituto Superior Tecnico
Technical University of Lisbon
Av. Rovisco Pais, 1
1096 Lisboa Codex   PORTUGAL
Tel/Fax: +351-1-848-2425
Tel (direct line): +351-1-841-8351 (also fax on request)
Email: chpsanto@beta.ist.utl.pt, hal.santo@acm.org
URL: http://yoyo.zcu.cz/~skala/int_confer.html

Supporting Organizer:
Vaclav SKALA
Computer Science Department
University of West Bohemia
Americka 42, Box 314
306 14 Plzen   Czech Republic
Tel: +42-19-2171-212
Fax: +42-19-2171-213
Email: skala@kirke.zcu.cz
URL: http://yoyo.zcu.cz/~skala

This is a final request for participation in the Second
International Conference on Graphics Education (EDUGRAPHICS '95)
and the Fourth International Conference on Computational Graphics
and Visualization Techniques (COMPUGRAPHICS '95), being held in
Portugal on 11-15 December, 1995. The extended deadline is June
30, 1995, but there may be some flexibility on this date if first
contact is made immediately.

This event is being launched in Cooperation with the following

organizations:
"ISGG - International Society for Geometry and Graphics"
"CGS - Computer Graphics Society"
"ACM - Association for Computing Machinery" (pending)

The conferences will be held concurrently and aim at gathering
together outstanding educators, professionals and researchers in
Graphic Science, and will comprise invited lectures, panels,
videos and papers reviewing, presenting a state of the art,
discussing future directions or reporting new results on the
respective fields. It will be open to contributors from all ranks
and from over the world. The conferences will not be merely
'computer graphics' meetings but truly all-encompassing events on
all aspects and sub-areas of Graphics/Graphic Science.
Contributions will be properly refereed by the corresponding
Program Committees. A selection of compatible papers will be made
to appear in "Finite Elements in Analysis and Design", "Computer
Aided Design" and the "Journal of Visualization and Computer
Animation". Other journals will be considered for other topics.
The proceedings will constitute a formal, registered publication,
internationally distributed. A small exhibition of publications
and graphics vendors is also planned.

During "EDUGRAPHICS '95" the "Steve M. Slaby Award for Outstanding
Contributions to Graphics Education" will be inaugurated.

Topics include: Technical Drawing, Engineering Graphics,
Descriptive Geometry, Theoretical Graphics and Classical Geometry,
Computational Geometry, Geometric Modeling, CAGD, Computer and
Computational Graphics, Image Synthesis and Processing, Art, CADD,
CAI, CAD/CAE, CAAD, GIS, Industrial and Engineering Design, Finite
Element and other Numerical Methods, Artificial Intelligence and
Expert Systems, Scientific Visualization, Standards,
Systems/Software, Human-Computer Interface, Physically-based
Modeling, Animation, Natural Scene Simulation and Fractals.

The following are abstracts of some of the invited lectures:

A. Robin Forrest: Experiments with Sound and Touch in Scientific
Visualisation"
Complex data can be hard to visualise using conventional computer
graphics : the visual system can be overloaded, and some data
prove difficult to display graphically. The talk will discuss how
sound and touch can be used as additional channels for the
visualisation of scientific data and will highlight experiments at
the University of East Anglia using non-immersive sound and vibro-
tactile sensing.

Walter Rodriguez: "Virtual Time-Machines"
The Virtual Time Machine is an emerging 4-D decision-making
technique for simulating environmentally-conscious design,
construction, and manufacturing processes. This presentation
consists of the FR definition, and will include video
demonstrations of its predecessors: ICV and IV++.

Daniel Thalmann: "Realtime behaviors of virtual creatures"
In this lecture, we will explain how to specify simple and complex
behaviors of virtual creatures from insects to humans. We will
emphasize the use of synthetic sensors to simulate perception and
task-level animation to perform the actions. Examples of group
behavior and vision-based actions will be presented.

Joan Truckenbrod :   "Subverting Interactivity"
Artists considering strategies for interactive artworks frequently

adopt behaviors of the computer rather than considering experiential artforms in relation to issues of self-perception and self-making. I am interested in the construction of artworks that tap into the histories, experiences and belief systems of the viewer turned participant, and have the potential for performative self-making.

Tutorials are also taking place in the following topic areas:
"Geometric Foundations of Computational Graphics"
"Introduction to the Foundations of Vision, Color and Perception-based Visualization"
"Introduction to Photorealistic Image Synthesis and Virtual Reality"
"Introduction to Fractals and their Applications"
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          |  JOBS/OPPORTUNITIES   |
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< Two Research Studentships at Centre for Advanced Inquiry
   in the Interactive Arts (CAIIA) >

Roy Ascott
Director of CAIIA
Tel/Fax: +44 1633 432174
Email: 100143.100@compuserve.com

For application forms:
Emily Hewitson
Fax: +44 1633 432002

Two Research Studentships for University of Wales MPhil/PhD, are available at the Centre for Advanced Inquiry in the Interactive Arts (CAIIA), Newport School of Art and Design:

1) Internet, web site design (VRML etc), distributed multimedia
2) interactive product design, interfaces, smart products

Grants are UK pounds 5,500 per annum plus dependants allowances. Applicants to hold good honours degree or equivalent.

Deadline for applications: 10 July 95
****
< f.Stop Photography Gallery and Darkrooms seeks new Director >

Roy Ascott
Email: 100143.100@compuserve.com

"f.Stop Photography Gallery and Darkrooms" in Bath England is becoming "Media Station". It's looking for a new Director to lead its transition into the digital future. The salary is around UK pounds 16500+ per annum. It's a great opportunity for someone with a track record to build an important cybercentre a truly international city.

Deadline: 14 July 1995
****
< Berklee College of Music seeks Chair for
   Music Synthesis Department >

John P. Lamar
Computer Systems Coordinator
Music Synthesis Department
Berklee College of Music

```
Tel: 617-266-1400 ext. 484
Email: jlamar@it.berklee.edu

Send all materials to:
Music Synthesis Chair Search Committee
Office of the Technology Division Chair
Box #288
Berklee College of Music
1140 Boylston St.
Boston, MA 02215
```

Berklee College of Music is accepting applications for Chair of
the Music Synthesis Department. The Chair's primary
responsibility is management of the department, faculty, and
facilities, as well as setting the direction for this dynamic,
trend-setting department. You will establish and assess
department goals annually, formulate department policy, oversee
the development of curriculum, as well as the hiring, assignment,
development of faculty and staff. The chair will manage the
budget and maintain the department's relations with the industry.
Other responsibilities may include teaching and student advising.
This is a permanent, year-round administrative position.

The Music Synthesis Department at Berklee has 150 student majors,
8 faculty, and 10 staff. The Chair oversees three music synthesis
laboratories, with full MIDI and hard-disk recording support, a
lecture/performance hall, and MIDI-equipped ensemble rooms. Our
goal is to equip our students with all the tools necessary to
succeed in a variety of careers, including multimedia,
performance, production, and sound design. Our alumni can be
found in every facet of the popular and contemporary music
business, worldwide. Berklee is the world's largest college of
music, with an enrollment of more than 2,600 students, nearly 40
percent of them international.

We're looking for someone who has a Master's degree and/or
equivalent professional experience, with a background in teaching
and college or music industry administration. A thorough
knowledge of current practices and technological advances in Music
Synthesis is required. Starting date is January 1, 1996. Please
send us all of the following: your resume; a disc or tape of
recent productions or performances; two letters of recommendation;
and other appropriate documentation; along with your letter of
application, by October 1, 1995.

Berklee College of Music is an Equal Opportunity Employer.
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< Chair in Music: LaTrobe University >

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David Hirst, Chairperson
Department of Music
La Trobe University
Bundoora, Vic 3083
Australia
Telephone: +61-3-9479 2879
Fax: +61-3-9479 3651
Email: musdjgh@lure.latrobe.edu.au
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Application details may be obtained from the Secretary of the
Selection Committee:
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Telephone +61-3-9479 2026
Fax +61-3-9471 0369
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Applications are invited for the Chair in Music within the School

of Arts and Media in the Faculty of Humanities. The Department of
Music offers, within the context of a solid foundation in the
Western musical traditions, study and research in composition,
computer music, performance, historical musicology, tonal and
atonal theory, audio recording, and the physics of music. A full
undergraduate and postgraduate program is offered in the Bachelor
of Arts, Master of Arts by research, PhD and a Graduate Diploma in
Contemporary Music Technology. A Bachelor of Music will be
introduced in 1996.

The University seeks a musician distinguished in one or more of
the following areas: composition, music technology, performance,
musicology, or music theory. The successful candidate will be
expected to teach, provide academic leadership to the Department
of Music, act as advocate for the discipline within the University
and the wider community and, when practicable, serve as Head of
the School of Arts and Media.

The University reserves the right not to make an appointment or to
make an appointment by invitation.

Salary: AU$80,176   per annum.

Applications close 15 September 1995.

WWW Page:
http://farben.latrobe.edu.au/Music_Docs/MusDeptHomePge.html

La Trobe University supports Affirmative Action recruitment
strategies and the principles of Equal Opportunity in all
appointments and provides a smoke-free work environment.
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 | ACKNOWLEDGMENTS |
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Leonardo/ISAST gratefully acknowledges Interval Research
Corporation for support of Leonardo Electronic Almanac.

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

=====: Section Heading Delineation - 62-character sequence
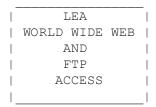*****: Item Delineation within Section - 62-character sequence
-----: Separator for subsections within items.
< : Begin Item Title - search for the character "<" followed by
two spaces
  >: End Item Title - search for two spaces followed by ">"
|_ or _|: This sequence takes you to the next SECTION TITLE.
Item titles and author/contributor names appear exactly the same

in the Table of Contents and at the location of the actual item.
Section names appear in all capital letters, and appear with all
letters in sequence with no spaces (PROFILES, REVIEWS, etc.).

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|       LEA          |
| WORLD WIDE WEB     |
|       AND          |
|       FTP          |
|      ACCESS        |
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The LEA archives, including the Leonardo Electronic Gallery, has
been moved over to the World Wide Web site, which is now
accessible using the following URL:

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

The following are the specifics about ftp access for Leonardo
Electronic Almanac:

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

Currently only back issues, submission guidelines and a limited
number of current files are available via ftp.

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|       LEA          |
|   PUBLISHING &     |
|   SUBSCRIPTION     |
|   INFORMATION      |
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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

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