



Leonardo Electronic Almanac volume 13, number 1, January 2005
http://lea.mit.edu

ISSN #1071-4391

CONTENTS

EDITORIAL

< Editor' s Reflections by Nisar Keshvani >

FEATURES

< Thank you LEA Peer Reviewers 2004 >

< *The Dusable Project*: Hypertext Narrative Strategies in Live Performance, by Kathryn Farley >

< 10 Years Ago in LEA -
B*rbie' sVirtualPlayhouse@CityOfTheFuture.ent
A Very Low-Tech, Pseudo-Immersive Reality, by Henry See>

< LEA Author Index 2004 >

< LEA Highlights 2004 >

LEONARDO REVIEWS

< Film Art Phenomena, reviewed by Mike Leggett >

< New Philosophy for New Media, reviewed by René Beekman >

< Funology: From Usability to Enjoyment, reviewed by John Knight >

OPPORTUNITIES

< Director, Institute for E-Learning and Research in the Arts and Design, Penn State University >

ISAST NEWS

< Leonardo and San Francisco Art Institute Announce Partnership >

< New Horizons Award Given to Critical Art Ensemble >

EDITORIAL

EDITOR' S REFLECTIONS

by Nisar Keshvani

LEA Editor-in-Chief

E-mail: nisarh [@] keshvani [dot] com

I consider myself rather fortunate sitting at the helm of the Leonardo Electronic Almanac - besides the daily data mining, it allows me to keep abreast of new developments and to interact with brilliant individuals. As in every other year, this is the season for reflecting, assessing where we have arrived and mapping out where we go from here.

During this process, what has become evident is LEA' s machinery, its international nature and the art, science and technology community that drives the publication. It involves many man-hours to produce each issue, not including the amount of time the author spends researching and documenting their findings, the back and forth before their essays are published and the time peer reviewers invest in providing critical and valuable input.

The production team consists of four people, each based in a different country. There are 23 individuals from 11 countries who serve as editorial, gallery board members and corresponding editors. In 2004, 41 authors from 16 countries were published in LEA with input from 32 peer reviewers based in 13 countries.

Naturally this is made easier and more efficient by our existence online. The downside however, is to date, academics and their peers are often asked if essays published online are as rigorously reviewed, if the process is blind and if the publication has a support infrastructure similar to a print journal.

Like any other online journal, LEA faces the same questions, with a steady stream of emails from academics asking these exact questions right around promotion time. LEA is indeed an international, blind-reviewed online journal with approximately 70 percent of submissions meeting our publication criteria.

In this first issue of 2005, we' d like to extend a big "thank you" to all our 2004 peer-reviewers. These anonymous significant individuals play a crucial part by generously giving their educated opinions on manuscripts submitted to us for publication, thus ensuring that we publish only material that meets the highest academic standards and adds to the existing body of knowledge in the field.

Kathryn Farley aptly describes most LEA authors' sentiments when saying: "I wish to thank the anonymous LEA reviewers who provided such helpful and detailed commentary on this paper. I

greatly appreciate their thoughtfulness and expertise."

Listed in LEA's 2004 Author index are our contributors who deserve special mention for bravely pushing boundaries and presenting innovative ideas. Our guest editors Fatima Lasay and Michael Punt have done well in unearthing young scholars and identifying new research amidst the tsunami of submissions. Last year's content presented eclectic material ranging from evolution of artworks using telephones to hypertext to cross-cultural online collaborations, to the supernatural.

Our central text this month is an article by Kathryn on *The DuSable Project*, a "collaborative, media-intensive" event that combines elements of improv comedy, theater, computer-based technology and hypertext.

From LEA's archive, first published in January 1994, we present an excerpt from "B*rbie'sVirtualPlayhouse@CityOfTheFuture.ent" with Henry See providing an insider perspective, as he tackles sensitive issues in the description about his piece. This is a multimedia work lampooning Virtual Sex, and was presented at SIGGRAPH '93.

In Leonardo Reviews, we include reviews by Mike Leggett on the book *Film Art Phenomena*, René Beekman on *New Philosophy for New Media* and John Knight on *Funology: From Usability to Enjoyment*. Check in on the latest events in the Leonardo/ISAST community.

Readers will find our author's index and summary of 2004 issues a useful feature for research. This index provides direct URLs for easy access and is available both in pdf and html format at: <http://mitpress2.mit.edu/e-journals/LEA/archive.html> Backissues dating to 1993, are also available online and searchable with our advanced search function.

Special thanks are due to Patricia Bentson and Nicholas Cronbach for their guidance with the index and Phil Cadigan for his help with the search function. We'd also like to thank managing editor Patrick Lambelet, webmaster Andre Ho and administrator Lee Lia Irwin for their untiring efforts and amazing energy. Kudos to Michael Punt and the Leonardo Review Panel for their succinct reviews that arrive punctually each month. Thanks also to the LEA Editorial, Gallery boards, corresponding editors, Roger Malina, Pamela Grant-Ryan, Melinda Klayman and Kathleen Quillian for their strategic input.

We strongly encourage readers to email their manuscripts, special issue proposals and artist statements to:
lea@mitpress.mit.edu

Check out LEA's greeting at: <http://mitpress2.mit.edu/e-journals/LEA/ecard>

Warmest wishes for the new year from all of us at LEA!

THANK YOU LEA PEER-REVIEWERS
2004

THANKS TO OUR MANUSCRIPT REVIEWERS

Leonardo publications, including *Leonardo Electronic Almanac*, are peer-reviewed: before acceptance, every article is reviewed and commented on, usually by three anonymous reviewers. Based on these reviews, we make a decision on whether to publish the text. In LEA, we currently publish roughly 70% of the texts submitted for publication consideration.

LEA covers a wide variety of fields, many of them interdisciplinary and often in emerging areas of artistic experimentation, research and scholarship. Our peer-reviewers help us focus on new topics of artistic interest, as other areas may move out of the center of artistic experimentation and become part of established disciplines. In very new areas of inquiry, it is often difficult for us to identify three reviewers competent to review the work; in these cases, we may ask authors themselves to suggest new reviewers for our peer-review panel. The Leonardo network grows and evolves in a very real sense through this process of collaborative filtering.

We wish to take this opportunity to warmly thank the reviewers who in the last year have spent time writing very thoughtful reviews on a volunteer basis. These reviews both help us in making publication decisions and help the authors to improve their texts.

We thank in particular:

- * Giselle Beiguelman - Catholic University of Sao Paulo, Brazil
- * Paul Brown - Visiting Fellow, Birkbeck College, University of London, United Kingdom
- * Ricardo Dal Farra - Estudio De Musica Electroacoustica, Buenos Aires, Argentina
- * Marta de Menezes Graca - University of Oxford, United Kingdom

- * Steve Dietz - ZeroOne San Jose International Festival of Art and Technology, USA
- * Sven Dupre - Ghent University, Belgium
- * Aileen Familara - Isis International-Manila, Philippines
- * Kenneth Fields - Peking University, China
- * Rudolf Frieling - Center for Art and Media, Germany

- * George Gessert - Artist, USA
- * Young Hae Chang - Young-Hae Chang Heavy Industries, Korea
- * Drew Hemment - FutureSonic, United Kingdom
- * Stephen Jones - Independent artist, Australia
- * Eduardo Kac - School of the Art Institute of Chicago, USA

- * Choy Kok Kee - Ngee Ann Polytechnic, Singapore
- * Aleksandra Manczak - Artist and Teacher, Poland
- * Michael Naimark - University of South California, USA
- * Sheila Pinkel - Pomona College, USA
- * Louise Poissant - University of Quebec, Montreal, Canada
- * Scott Rettberg - Richard Stockton College of New Jersey, USA

- * Janet Saad-Cook, Independent artist, USA
- * Marla Schweppe - Rochester Institute of Technology, USA
- * Steven Shaviro - University of Washington, Seattle, WA, USA.

- * Sonia Sheridan - School of the Art Institute of Chicago, USA
- * Thom Swiss, University of Iowa
- * Vladimir Tamari - Artist, Japan
- * Darren Tofts - Swinburne University of Technology, Australia

- * Mark Trayle - California Institute of the Arts, USA
- * Marc Tuters - Hexagram & VSMM, Canada
- * Guy van Belle - Independent artist and educator,
mxHz.org, Belgium
- * Marc Voге - Young-Hae Chang Heavy Industries, Korea
- * Stephen Wilson - San Francisco State University, USA

FEATURE

THE DUSABLE PROJECT: HYPERTEXT NARRATIVE STRATEGIES IN LIVE PERFORMANCE

by Kathryn Farley, Department of Performance Studies,
Northwestern University, 807 Church Street, Apartment 401,
Evanston, IL 60201, U.S.A.

E-mail: k-farley [@] northwestern [dot] edu
<http://www.kathrynfارley.org>

KEYWORDS

live performance, digital narrative, interactivity, audience participation, hypertextuality, DuSable Project, navigation, multiform storytelling

ABSTRACT

This article examines the convergence of hypertextuality and theater praxis. It begins with an overview of *The DuSable Project*, a collaborative, media-intensive event that combined Chicago-style comedic improv with interactive computer-based technologies to tell the story of Jean Baptiste Pointe DuSable, the city's first non-native settler. I then look closely at the work's narrative goals, structure and operational dynamics in a live performance setting. Next, in order to frame the project within a theoretical context, I explore concepts of hypertext that most directly apply to this type of endeavor. The paper concludes with suggestions for possible future directions in hypertext study.

1. INTRODUCTION

1.1 PREFACE

In the original version of this paper, I attempted to apply general concepts of hypertext to specific multimedia theater practices in order to compare the similarities between

hybridized literary and performance genres. I found, though, that the models of study did not fit so neatly together. It was further pointed out to me by one reviewer that I was operating within a constrictive binary - one that set "traditional" theater against more emergent practices. Finally, my understanding of hypertext theory was itself problematic, relying on narrow generalizations and a restrictive sample of material in the field of literary studies. In the reviewer's estimation, this type of approach reproduced "the theoretical narrowness that beleaguered hypertext theory during the 1990s." Thus, a thorough re-examination of the paper's theoretical foundation and organizational structure was in order.

To this end, I here begin by introducing *The DuSable Project* and its interactive narrative components. Then, moving outward from this central focal point, I locate and explore hypertext theories that most directly relate to the participatory dimensions of the play's text. In the article, I reference hypertext theory to locate my research within an interdisciplinary context - one in which literary modes of inquiry have proven to be the most useful and appropriate.

1.2 DESCRIPTION OF *THE DUSABLE PROJECT*

The DuSable Project celebrates Chicago's rich and varied cultural heritage and is intended for young audiences (grades nine through twelve). The story of the play follows the life of Jean Baptiste Pointe DuSable (1745? -1818) [1] from his departure from Haiti to the sale of his Chicago homestead.

The production presents the adventures of Chicago's first settler in a classic Second-City style [2]. An ensemble of six actors assumes multiple characters in the story, while both live and recorded music help to set the tone for each dramatic sequence. In utilizing comedic improvisational forms, *The DuSable Project* approaches the subject of Chicago's origins in a humorous, forthright and revealing manner, allowing the story to be accessible to a young audience, yet containing more sophisticated references for all ages.

The improv comedy techniques employed in the production represent a theatrical tradition indigenous to Chicago - one notable for promoting a high level of audience/performer interactivity. In Second City revues, the audience is called upon to suggest the subject matter of a sketch. *The DuSable Project* adhered to this practice, by allowing the audience to choose various narrative options in order move the plotline forward (these options are discussed at greater length in section two, below).

Like Second City revues, a majority of the action and dialogue in *The DuSable Project* was scripted, but performers were encouraged to ad-lib lines and spontaneously respond to each other on stage, as well as to improvise reactions to the projected visual texts, as illustrated by the following image.

FIGURE 1: A student participant improvises responses to projected images of contemporary Chicago during a *DuSable Project* rehearsal. Photo courtesy of Kathryn Farley.

1.3 PLAY'S HISTORY

The DuSable Project was drawn from *DuSable*, a script

written by Chicago playwright Dan Zellner and developed in collaboration with Red Path Theater (Illinois' only Native American performance organization). Readings of the play have occurred at various local venues, including the Chicago Historical Society and Truman College. In addition, the script was presented as part of the first annual Juneteenth Festival of African-American theater at the University of Louisville. The text was subsequently developed for presentation in 3-D format through consultation with members of University of Illinois' Electronic Visualization Laboratory.

In late spring of 2003, a multidisciplinary group of doctoral candidates, staff and faculty received funding from the Northwestern University's Center for Interdisciplinary Research in the Arts to present a reconfigured version of the play [3]. This version would alter the text from a 3-D format to a more mobile, accessible and cost-efficient model of production [4].

The DuSable Project sought to enhance university support of art and technology endeavors and compliment human/computer interface design initiatives. To realize these goals, the project brought together practitioners from the disciplines of theater, computer science, performance studies and digital media to actively experiment with concepts of design for a digital stage, to test and modify implementation processes and to coalesce individual approaches to the creation of digital artworks for a live audience. Most importantly, the production provided Northwestern undergraduate and graduate students the opportunity to participate in the conception, design and presentation of an original multimedia work and to receive hands-on training in improvisational comedy techniques and digital media stage applications in the process.

When the collaborative group convened in the fall of 2003, we decided to involve the various Chicago cultural groups that held vested stakes in preserving DuSable's legacy in the project. These included Friends of DuSable and The DuSable League, as well as members of the Haitian, Catholic and Native American communities. We met with representatives from these organizations throughout the autumn in order to discuss the numerous historical and scholarly accounts of DuSable's life presented in the story. Based largely upon feedback obtained from the cultural groups, Zellner began to revise the play's text.

Originally, we intended to perform a complete version of the play in February 2004 in conjunction with Black History Month celebrations on campus. However, this was not a realistic (or achievable) goal, given our commitment to working with the Chicago-based cultural groups to revise the script. We decided, instead, to present a staged reading of one scene, which had undergone extensive modification, to members of the Northwestern community.

On 28 April, 2004 we hosted *The DuSable Project* community colloquium in the university library. The night's events consisted of the stage presentation of one scene from the play, followed by a roundtable exchange of ideas led by the collaborative team members and cultural group participants.

To realize the scene, we assembled a group of student actors (both undergraduate and graduates) to begin working on the text in late March, allowing us one month of rehearsal time before the presentation. The performers possessed varying levels of

acting experience and represented departments as diverse as radio/television/film, performance studies and mechanical engineering. From the start, the project's participants shared a great enthusiasm for the interdisciplinary thrust, experimental nature and collaborative spirit of the endeavor.

FIGURE 2: Student performers present the opening scene of *The DuSable Project* during the community colloquium on 28 April, 2004. Photo courtesy of Kathryn Farley.

2. STORYTELLING CONCEPTS AND EXECUTION

2.1 NARRATIVE GOALS

The DuSable Project sought to present history as an evolving process, or living entity, rather than a linear succession of past events. One of its primary aims was to encourage audience members to participate in the making and presenting of DuSable's story on stage. Instead of merely observing the past from a distance, *The DuSable Project* invited audience members to assume the role of historians themselves by selecting options pertaining to the visual material presented and, in so doing, to directly intervene in the narrative. By interacting so heavily in DuSable's story, it was hoped that the audience would experience history differently, hopefully in a more accessible, relevant and compelling manner. In sum, *The DuSable Project* experimented with a hands-on approach to historical study.

Another goal concerned new directions in playwriting. Zellner was committed to exploring non-traditional approaches to theatrical storytelling - particularly ones that integrated improv comedy traditions, or an audience's direct involvement in storytelling processes, in addition to testing how humor might be used as an educational tool. Thus, the interactive features of the narrative were devised, in part, to help foster a dynamic and fun learning environment. Like a Second City show, the play was meant to be as entertaining as it was provocative.

2.2 AUDIENCE INTERVENTIONS

In the play, the audience was called upon to pilot the text, or navigate through the various narrative selections, in order to advance the plotline forward. These options corresponded to absences in the historical recordation of DuSable's life. There are, for example, various (sometimes contradictory) scholarly explanations of DuSable's origins, in addition to speculation concerning the reasons why he might have traveled to Chicago and why he decided to leave. The script cleverly allowed for the articulation of these separate theories and positioned the audience as the authority on which course of action to pursue.

In keeping with Second City improv traditions, *The DuSable Project*'s storyline was configured by audience suggestion. The scene dramatized for the colloquium, for instance, focused on DuSable's family origins and route to Chicago. Performers offered the audience the ability to choose between competing explanations pertaining to his background and journey to the Midwest region. The selections, in keeping with the democratic nature of improv comedy, were decided by a majority vote (either by hand or vocally) during the live performance.

Regarding authorship of the work, it must be noted that audience members of *The DuSable Project* possessed the ability to direct the plot spontaneously in live performance but did not

function as co-authors of the story. Zellner carefully controlled what options were available for selection and in what sequence they appeared in the text. Unlike improv comedy situations, then, audience members could not randomly suggest ideas that had not been included in the script. The reason was that each plot point corresponded to a set of pre-configured computer-generated images that placed the actors in certain time periods and locations. While it might have been possible to develop more options pertaining to the plot (possibly by including non-scholarly viewpoints), it would not have been feasible to build more digital scenery, given our production schedule or budget. Thus, the audience's spontaneous suggestions pertaining to plot could not be absorbed into the story.

2.3 NARRATIVE OPERATIONS IN LIVE PERFORMANCE

The DuSable Project contained a braided narrative, meaning once the audience selected an option that was then pursued by the actors, the plot returned back to a central point. This structure allowed for material introduced by alternative options to be shared with the audience.

Narrative branching, while opening up storytelling possibilities on stage, presented certain challenges to the actors in live performance. Let us consider an example from the community colloquium presentation. As stated above, the scene presented in the colloquium concerned DuSable's origins. The play offered two viable explanations for his place of birth and journey to Chicago. These options focused on either Canada or Haiti. The Canadian option represented the viewpoints of the many scholars who contend that DuSable was the son of a French nobleman who, after being enslaved for a period of his life, obtained his freedom and traveled to America. Another group of historians held that he journeyed from his birthplace of Haiti to the Midwest in order to expand his trading business. The actress playing Kittihawa, DuSable's Native-American wife, acts as the narrator of this section. She presents the audience plotline options in the following way (as scripted):

SCENE 2: ORIGINS
KITTIHAWA

Let's begin. Chicago - the city you know now - had to start somewhere. How did it begin? My husband, Jean Baptiste Pointe DuSable, was there at the beginning. In fact, he was the one who got it all started. You wouldn't believe how many accounts and stories and legends there are about DuSable. Some more accurate than others, but all told for a reason. All of them have a special meaning. Tonight you will choose which one you would like to see. Think about your choice and about the meaning of what you see. When you think about these things, you will see things in a new light. In the light of what's come before, what is, and what will be. Everyone ready?

(KITTIHAWA looks at ENSEMBLE, COMPUTER OPERATORS and AUDIENCE)

Let's go.

<CUE> fade to question mode design

KITTIHAWA

Here's your first choice. We are told that DuSable could have come from a number of different places. You choose - HAITI or CANADA

<CUE> Images for each option pop up

KITTIHAWA

So what will it be?

<CUE> After audience has made selection - system "boots up"

2A. Haiti

<CUE> Images of Haiti

KITTIHAWA

Haiti. Excellent choice. Let's take a look at Haiti. There we are [5] .

As this excerpt indicates, the audience was provided various visual data (maps, charts, photos, illustrations) by means of which to make a selection regarding plot. To determine the majority's preference, the actress playing Kittihawa, functioning as narrator, would come forward to ask for a show of hands or ascertain this information based on what she heard. In rehearsal, the actors practiced receiving loud responses from the audience pertaining to the selection process (much like the boisterous antics associated with an improv comedy selection). Figure 3 depicts the positioned of the actress playing Kittihawa - a location intended to maximize her ability to perceive and respond to audience selections.

FIGURE 3: Actors rehearse the action of offering the audience narrative options pertaining to DuSable's origins. The actress playing Kittihawa is wearing glasses. Photo courtesy of Kathryn Farley.

Unfortunately, rehearsal scenarios did not address the full range of possible audience reactions to plot options. What the actors had not prepared for was no response at all. In fact, during the colloquium performance, someone affiliated with the production had to call out a selection (in this case it was "Haiti") because no one else responded. Audience apathy (or perhaps surprise) served to throw the actors slightly off balance.

Further, since plotline options were linked to the central story, a gap between selection options meant that potentially the plotline could not advance. The branched structure proved that if any link in the chain came unhinged, the entire storyline would be affected. Also, unscripted elements in an otherwise scripted narrative could potentially cause problems, especially to novice performers.

3. CONTEXTUALIZING HYPERTEXT

3.1 THEORY-BASED PERSPECTIVES

In my view, the plotline of *The DuSable Project* exemplifies a multiform model of theatrical storytelling. What I mean by this is that, in accordance with Janet Murray's definition, the story served as a ". . . dramatic narrative that presents a single situation or plotline in multiple versions, versions that would be mutually exclusive in our ordinary experience" [6] . The scene performed in the community colloquium, for example, presented two possible narrative pathways. Each route contained distinct terrain and topography, but led back to a central part of the story (in this case, to information about DuSable's methods of travel).

Given the prevalence of multiform devices in the plot of *The DuSable Project*, I would contend that the play qualifies as cyberdramatic text. Murray utilizes the term "cyberdrama" to denote a digital story mode that encompasses many narrative formats and styles, all containing strong participatory dimensions. This play's text is cyberdramatic in its reinvention of theatrical storytelling forms for digital application - the discovery of narrative devices that embrace multiple possible worlds and world views that audiences not only experience, but also in some ways control.

The significance of multiform storytelling in a theatrical context is that it permits audiences to actively engage in narrative formulation. Murray remarks, in reference to literature, that "This can be unsettling to the reader, but it can also be experienced as an invitation to join the creative process" [7]. She goes on to cite improvisational theater as one example of a multiform medium that invites a heightened level of audience involvement.

As a type of digital narrative, *The DuSable Project* most closely resembles Espen Aarseth's concept of "ergodic" literature, in which ". . . non-trivial effort is required to allow the reader to traverse the text" [8]. According to this view, a reader must do something (take significant action) in order to navigate through and make sense of the story. Similarly, *The DuSable Project* called upon the audience to move through and make meaning of the plot. Audiences determined what pathways were pursued at each juncture, helping to fill in the details and direction of the storyline.

Aarseth's approach to hypertext study is particularly relevant to the focus of my article, as it is situated, in part, outside of literary studies traditions. He claims, for example, that "Cybertext is a *perspective* on all forms of textuality, a way to expand the scope of literary studies to include phenomena that today are perceived as outside of, or marginalized by the field of literature" [9]. In other words, his notions of the ergodic nature of hypertext may help to bridge the divide between literary modes of hypertext study and hypertextual practices in non-text-based fields.

Other scholars/artists have written about hypertext in relation to storytelling within hybrid, time-based media performance. Such perspectives can be found in works such as *New Screen Media: Cinema/Art/Narrative*, in which various authors look at "issues of audience engagement in recognized works of various genres" [10]. Although the book mostly addresses film studies concerns and genealogies, the discussions regarding theorizing hypertext within new media frameworks are especially useful. One author, for instance, posits an intriguing alternative to current methods of study. He suggests a spatial analysis of narrative ("narrative as space rather than a succession of events") [11]. This type of inquiry might be particularly relevant to experiments such as *The DuSable Project*, as it represents a way to understand storytelling as an exploration of a hypertextual environment, such as the one fostered by this work.

3.2 PRACTICE-ORIENTED MODES OF STUDY

It has been argued that print-bound experimental writing laid the foundation for many of hypertext's principal models. The

works of James Joyce, Raymond Queneau and Vladimir Nabokov, among others, are often cited as antecedents of current hypertext formats. While it is beyond the scope of this article to analyze these authors' individual contributions in greater detail, suffice it to say that their writings have influenced the nonlinear, nonsequential and multiform properties of digital literary genres in significant ways. To these works, Aarseth has added a detailed analysis of specific ergodic literary texts that might also serve as models of hypertext study [12].

In relation to theater practice, **The DuSable Project** is by no means the only endeavor that has attempted to integrate hypertext with live performance. There have been numerous events in the past few years that have experimented with hypertext formats, as well as other digital narrative strategies on stage. Rather than attempting to summarize all of them, it would be more productive to speak about one in greater detail in order to establish a basis of comparison for **The DuSable Project**.

Demotic, a theater work conceived and directed by Antoinette LaFarge and Robert Allen in July 2004 at the University of California Irvine, combined live performance and Internet technologies to examine the multiplicity underlying the American experience [13]. Like **DuSable**, the production integrated improv storytelling practices. In this instance, though, live actors interacted with a group of online players spread across many different time zones and physical locations. The live and virtual players could respond to each other, see each other and, most importantly, speak to one another. Together they forged an imagined space - a performance environment containing real and virtual features.

Demotic's text focused on language, specifically linguistic utterances. Words, phrases, speeches and lines formed the content of the players' interactions. Unlike **DuSable**, dialogue was predominately spontaneously produced (unscripted). Also, unlike **DuSable**, the audience was not allowed to re-direct the show's storyline. Rather, the players themselves possessed this ability.

In other words, hypertext narrative strategies functioned very differently in each performance environment. In **DuSable**, because the goal was to encourage audiences to direct historical processes first-hand, the storyline was dependent on their input. In **Demotic**, branching structures wove players' responses into a cohesive whole (resembling a political debate or community forum, in which multiple voices and perspectives can be heard). The players determined the storyline and narrative arc. Both productions sought to engage non-traditional storytelling methods towards interactive ends.

5. CONCLUSION: FUTURE DIRECTIONS IN HYPERTEXT RESEARCH

The role of the audience in **The DuSable Project** differed from more traditional presentational formats due to the participatory dimensions of the text. Granted it was an experimental undertaking, but one that might, in a very small way, serve to shape future directions in theatrical storytelling.

In exploring the hypertext features of **The DuSable Project** a number of important questions arise. These include: What does it mean for a playwright (as opposed to an author) to cede power to an audience? How might digital formats reconfigure the role of the playwright? Further, is theater ready for such revolutionary

change? Are such changes even possible? Time will surely tell.

Like Janet Murray, I remain optimistic that multiform narrative devices such as those employed in *The DuSable Project*, as well as other features of digital storytelling formats, when successfully employed in live performance settings, will take participatory engagement one step further. As she puts it, "As a new generation grows up, it will take participatory form for granted and will look for new ways to participate in even more subtle and expressive stories" [14].

In terms of future directions in hypertext research, I would suggest that scholars adopt transdisciplinary (as opposed to interdisciplinary) methods of analysis. This process might begin by developing theories about digital media that move across the disciplinary spectrum (not just between two complimentary fields of study). The focus should be on evaluating the unique characteristics of computerized technologies, then applying those understandings to various disciplines and areas of study. This important endeavor would undoubtedly involve transdisciplinary collaboration on every level.

In order for hypertext models to more effectively integrate theater and performance studies perspectives, more attention must be paid to the performative aspects of a dramatic text. In other words, scholars/artists need to explore the ways in which a play represents a hybrid text, and its performance a temporal event.

To understand what hypertext means within a theatrical context, a greater commitment on the part of artists currently working with computer-based technologies in live performance to document, present and publish their findings is needed. Without such recording and evaluation, future generations of students will be forced to rely on theoretical perspectives concerning digital art, making for a live audience that cannot replace the value of practical experience.

* IMAGES ACCOMPANYING THIS ARTICLE CAN BE SEEN AT THE LEA WEBSITE: <<http://lea.mit.edu>>

REFERENCES AND NOTES

1. Jean Baptiste Pointe DuSable, a man of African descent, built his home in the latter part of the eighteenth century on the north bank of the Chicago River. A prosperous and enterprising fur trader, he established and maintained a host of local businesses. Due to his entrepreneurial prominence, as well as his linguistic and diplomatic abilities, DuSable effectively forged connections with both native and immigrant populations. He was regarded as a kind, generous and hardworking person, who favorably contributed to early Chicago culture. Many details of DuSable's life were never formally recorded. Thus, historians have disagreed on significant details of his story. Theories pertaining to the reasons why he might have traveled to Chicago and why, many years later, he decided to leave have been especially numerous and oftentimes contradictory. *The DuSable Project* examines many scholarly theories concerning his life and travels.

2. Second City, a Chicago theatrical institution, has served as a guiding force in improvisational comedy since its inception in

the late 1950s. The theater is notable for training student participants how to utilize the rules and agreements that govern improv, as well as how to apply classroom teachings to real-world performance environments. Besides training, Second City is known for producing comedy revues that satirize contemporary cultural beliefs and practices. Alumni include a venerable who's-who of comedy, such as: Dan Ackroyd, Alan Alda, John Belushi, John Candy, Shelly Long, Gilda Radner, Martin Short, George Wendt, not to mention my own first cousin, Chris Farley, who participated in various mainstage productions in the 1980s.

Second City revues are characterized by two identifiable features: a heightened level of audience participation and strong ensemble dynamics. Unlike a traditional play, the audience is called upon to fill in the subject matter and details of select sketches. In this way, audience members are expected to collaborate with the performers to create or refine storytelling elements. The ensemble on stage must establish and maintain an environment in which such interaction is possible. In other words, actors must help the audience to understand what is being asked of them and, at the same time, welcome the suggestions they might offer in a supportive and cooperative manner.

3. To learn more about the mission and activities of The Center for Interdisciplinary Research in the Arts, please refer to their web site at <<http://www.northwestern.edu/cira>>.

4. This new version of the play utilized a portable stage apparatus that included equipment pre-configured for digital theater production by Dan Zellner and members of his Chicago-based theater company, Studio Z.

5. This excerpt is taken from Dan Zellner's draft version of *DuSable*, dated 10 April 2004, pp. 3-4. The script is a work-in-progress.

6. Janet H. Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace* (Cambridge, MA: MIT Press, 2000) p. 30.

7. See J. Murray [6], p. 38.

8. Espen J. Aarseth, *Cybertext: Perspectives on Ergodic Literature* (Baltimore, MD: The Johns Hopkins University Press, 1997) p. 1.

9. See Aarseth [8], p. 18.

10. Martin Rieser and Andrea Zapp, eds., *New Screen Media: Cinema/Art/Narrative* (London, British Film Institute, 2002) p. xxv.

11. See Jon Dovey, in M. Rieser and A. Zapp [10], p. 140.

12. Aarseth [8], pp. 65-75.

13. For more information about *Demotic*, please refer to <http://yin.arts.uci.edu/~players/demotic/about.html> .

14. Murray [6], p. 271.

AUTHOR BIOGRAPHY

Kathryn Farley (stage director of *The DuSable Project*) is a doctoral candidate in the Department of Performance Studies at Northwestern University, where she is completing a dissertation entitled *Teaching Performance in the Digital Age: Computerized Technologies, Improvisational Play Techniques and Interactive Learning Processes.* At Northwestern, Kathryn has taught undergraduate courses focusing on the performance of contemporary drama, the adaptation of fiction and the integration of technology into live theater. She is the 2004-2005 recipient of the Northwestern Alumnae Association Dissertation Recognition Award. Her work has been published in such interdisciplinary periodicals as *Body, Space and Technology* and *Crossings: Electronic Journal of Art and Technology*.

A digital portfolio of Kathryn's artistic and academic work can be found at <http://www.kathrynfarley.org>.

ACKNOWLEDGEMENTS

I wish to thank the anonymous LEA reviewers who provided such helpful and detailed commentary on this paper. I greatly appreciate their thoughtfulness and expertise. I am also grateful to Dan Zellner for his permission to reference portions of a draft copy of the *DuSable* script - a version that was given presentation pending further rewrites.

MANUSCRIPT RECEIVED 15 JUNE 2004

ONE FROM THE VAULT - 10 YEARS AGO IN LEA

B*RBIE' SVIRTUALPLAYHOUSE@CITYOFTHEFUTURE.ENT
A VERY LOW-TECH, PSEUDO-IMMERSIVE REALITY

by Henry See
4371 Christophe Colomb
Montreal (Quebec) CANADA H2J 3G4
Email: CDA1077@applelink.apple.com

Introduction

Simple programs such as "Eliza" have demonstrated the seductive power of our relationship with computer technology. We are gullible; we want to believe. Now we want to buy into the myth of "Virtual Reality." Not only has an industry spawned around the development of the technology, but another is spawning around the propagation of the myth. The promises are being made. The dowry is being paid. The marriage bed is being laid. And if the emperor has no clothes, it doesn't matter because in VR you leave the body behind. "B*rbie's Virtual Playhouse" is a satirical look at the three legs of the stool of hip, post-modern life: virtual reality, cybersex, and home shopping. The satire is meant to include both the physical and the contextual trappings of VR. We note this at the beginning because no matter how broad the strokes of satire, there are always people who take it seriously. "B*rbie's Virtual Playhouse" is a hypermedia work, not a virtual reality. It was financed in part by a grant from the Media Arts section of the Canada Council.

Description

The Ad from late-night TV
"B*rbie's Virtual Playhouse" brings all the excitement of

virtual reality to your home! No longer is VR a question of high-end graphics computers, fancy goggles, and data-gloves! You can experience real VR on your home computer! No fuss! No muss! No messy keyboards!

Through the revolutionary new Hot-Date-A-Glove(tm), you have access to all the mysteries, all the adventure, and all the sexual intrigue which make "B*rbie's Virtual Playhouse" the cyberspecial place to be! Don the Hot-Date-A-Glove(tm), squeeze the Generic Sexual Analog Interface Device (Sex AID), choose your character, and become an active participant in this world of the not-so-distant future!

Change your sex as easily as you change your socks! Experience the existential angst of existence as a hypertext link! Investigate the philosophical implications of two-dimensional reality! Have fun and influence pseudo-people! It's the entertainment sensation for the entire family! And not only that! If you act now, you and your friends can play together in "B*rbie's Virtual Playhouse"! At BVP, there's always room for one more!

[THIS TEXT CAN BE VIEWED IN ITS ENTIRETY BY LEA/LEONARDO SUBSCRIBERS AT:
<http://mitpress2.mit.edu/e-journals/LEA/archive.html>]

LEONARDO ELECTRONIC ALMANAC AUTHOR INDEX 2004
--

Leonardo Electronic Almanac: Volume 12 2004
Author Index
HTML: http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/index.htm
PDF: http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/LEAWrdIndex2004.pdf

ANDERS, PETER. "A Procedural Model for the Integration of Physical and Cyberspaces in Architecture," Leonardo Abstracts Service in Leonardo Electronic Almanac 12, No. 10 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n10.txt>.

ANDERS, PETER. "Hauntings: Ghosts, Technology and the Observer's Domain," in LEA Special Issue Part II "From the Extraordinary to the Uncanny," Leonardo Electronic Almanac 12, No. 12 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n12.txt>.

BAKER, CAMILLE C. "Biosensor And Media Art-Induced Meditation And Telepathy," in LEA Special Issue Part I "From the Extraordinary to the Uncanny," Leonardo Electronic Almanac 12, No. 11 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n11.txt>.

BARBER, JOHN F. "Parallel Worlds in Science-Fiction Literature," in LEA Special Issue Part I "From the Extraordinary to the Uncanny," Leonardo Electronic Almanac 12, No. 11 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n11.txt>.

BENARI, MOTTI, BEN-PORAT, ZIVA, BIBERMAN, EFRAT, CHUDNOVSKY, LIZA, AMIEL-HAUZER, and SEGAL, EYAL. "The Intertextual Thread: A New Cultural Unit in Hypertext," Leonardo Electronic Almanac 12, No. 9 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n09.txt>.

BERMUDEZ, JULIO. "Editorial: Art and Design: Cures for Society's Growing Data Perceptual Blindness?," Leonardo Electronic Almanac 12, No. 5 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n05.txt>.

BURNS, CHRISTOPHER, and BURTNER, MATTHEW. "Recursive Audio Systems: Acoustic Feedback in Composition," in Special Issue "Groove, Pit and Wave: Recording, Transmission and Music" (Supplement to LMJ 13), Leonardo Electronic Almanac 12, No. 2 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n02.txt>.

BUSSIÈRE, MICHAEL. "Performance Space Meets Cyberspace: Seeking the Creative Idiom and Technical Model for Live Music on Broadband," in Special Issue "Groove, Pit and Wave: Recording, Transmission and Music" (Supplement to LMJ 13), Leonardo Electronic Almanac 12, No. 1 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n01.txt>.

CHEDDIE, JANICE. "Translation, Transcodification, Transmission: Erika Tan's Pidgin: Interrupted Transmission," Leonardo Electronic Almanac 12, No. 6 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n06.txt>.

COLLINS, NICOLAS. "Introduction: Groove, Pit and Wave," in Special Issue "Groove, Pit and Wave: Recording, Transmission and Music" (Supplement to LMJ 13), Leonardo Electronic Almanac 12, No. 1 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n01.txt>.

CORCORAN, MARLENA. "The Gallbladder Sonata: Transmission Time on the Internet," in Special Issue "Groove, Pit and Wave: Recording, Transmission and Music" (Supplement to LMJ 13), Leonardo Electronic Almanac 12, No. 1 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n01.txt>.

COY JOSEPHINE. "Questions of Reality: *Media Ghosts*," in LEA Special Issue Part II "From the Extraordinary to the Uncanny," Leonardo Electronic Almanac 12, No. 12 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n12.txt>.

DE SOUZA E SILVA, ADRIANA. "Art by Telephone: From Static to Mobile Interfaces," Leonardo Electronic Almanac 12, No. 10 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n10.txt>.

FOST, JOSHUA. "Toward the Glass Bead Game - A Rhetorical Invention," Gallery, Leonardo Electronic Almanac 12, No. 5 (2004) <<http://mitpress2.mit.edu/e->

journals/LEA/TEXT/Vol_12/lea_v12_n05.txt>.

GIACCARDI, ELISA. "Principles of Metadesign: Processes and Levels of Co-Creation in the New Design Space," Leonardo Abstracts Service in Leonardo Electronic Almanac 12, No. 10 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n10.txt>.

KESHVANI, NISAR. "Editorial: The Leonardo Educators Initiative & Abstracts Service," Leonardo Electronic Almanac 12, No. 10 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n10.txt>.

LAMBELET, PATRICK. "Editorial: Thank you, LEA 2003 Peer Reviewers," Leonardo Electronic Almanac 12, No. 3 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n03.txt>.

LASAY, FATIMA. "Phase Space Portraits of the Nuestra Señora de los Dolores of Cabaclayon," Leonardo Abstracts Service in Leonardo Electronic Almanac 12, No. 10 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n10.txt>.

LASAY, FATIMA. "Editorial: Network Leaps, Bounds and Misses: Critiquing Regional Strategies for Digital Arts and Electronic Music in Asia and the Pacific," in LEA Special Issue "Network Leaps, Bounds and Misses," Leonardo Electronic Almanac 12, No. 8 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n08.txt>.

MARIÁTEGUI, JOSÉ CARLOS. "Latin American Media Art: Local Creation / Global Articulation," in Special Issue "Network Leaps, Bounds and Misses," Leonardo Electronic Almanac 12, No. 8 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n08.txt>.

MASSEY, LEN. "Spookie Cookies," in LEA Special Issue Part II "From the Extraordinary to the Uncanny," Leonardo Electronic Almanac 12, No. 12 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n12.txt>.

MILNER, JOHN. "Obituary: Kirill Sokolov: 1930-2004," in LEA Special Issue Part II "From the Extraordinary to the Uncanny," Leonardo Electronic Almanac 12, No. 12 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n12.txt>.

MORRIS, CHRISTINE. "Shape-Shifting through Reality: The Interactivity of Parallel Universes in the Daily Life of the Ancients," in LEA Special Issue Part I "From the Extraordinary to the Uncanny," Leonardo Electronic Almanac 12, No. 11 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n11.txt>.

NAPPI, MAUREEN. "Language, Memory and Volition: Toward an Aesthetics of Computer Arts," Leonardo Abstracts Service in Leonardo Electronic Almanac 12, No. 10 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n10.txt>.

PUNT, MICHAEL. "Editorial: From the Extraordinary to the Uncanny: The Unusual and Inexplicable in Art, Science and Technology," in LEA Special Issue Part I "From the Extraordinary

to the Uncanny," Leonardo Electronic Almanac 12, No. 11 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n11.txt>.

PUNT, MICHAEL. "Editorial: From the Extraordinary to the Uncanny: The Unusual and Inexplicable in Art, Science and Technology," in LEA Special Issue Part II "From the Extraordinary to the Uncanny," Leonardo Electronic Almanac 12, No. 12 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n12.txt>.

REDDELL, TRACE. "Mediating (through) Imagination: Web-Based Sound Art," in Special Issue "Groove, Pit and Wave: Recording, Transmission and Music" (Supplement to LMJ 13), Leonardo Electronic Almanac 12, No. 1 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n01.txt>.

SAIDON, HASNUL JAMAL, and SITHARAN, ROOPESH. "The Use of Internet for an International Collaborative Project," in Special Issue "Network Leaps, Bounds and Misses," Leonardo Electronic Almanac 12, No. 8 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n08.txt>.

SARUKKAI, SUNDAR. "Editorial: Beauty in the Beast," Leonardo Electronic Almanac 12, No. 6 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n06.txt>.

STENNER, JACK. "Public News Network: Digital Sampling To Create A Hybrid Media Feed," Leonardo Electronic Almanac 12, No. 5 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n05.txt>.

TIKKA, PIA. "Cinema and the Biological Basis of Otherness," in LEA Special Issue Part II "From the Extraordinary to the Uncanny," Leonardo Electronic Almanac 12, No. 12 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n12.txt>.

UNNIKRISHNAN, C.S. "Universe from Beyond: The Role of Unobservables in Science," in LEA Special Issue Part II "From the Extraordinary to the Uncanny," Leonardo Electronic Almanac 12, No. 12 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n12.txt>.

VAN VEEN, TOBIAS C. "Turn/Stile: Remixing Udo Kasemets' CaleNdarON," in Special Issue "Groove, Pit and Wave: Recording, Transmission and Music" (Supplement to LMJ 13), Leonardo Electronic Almanac 12, No. 2 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n02.txt>.

VESS, SABINE. "Project Description: ERA (Escuela Rural Andina de Cajamarca)---Activating the Talents of Rural Peru's Artisans," Leonardo Electronic Almanac 12, No. 5 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n05.txt>.

WAGNER, TEREZA. "UNESCO's Program in the Promotion and Support of Digital Art and Electronic Music in Asia and the Pacific," in LEA Special Issue "Network Leaps, Bounds and Misses," Leonardo Electronic Almanac 12, No. 8 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n08.txt>.

WHALLEY, IAN. "Recent New Zealand Electroacoustic Music: Nexus, Flux, Negotiation," in LEA Special Issue "Network Leaps,

Bounds and Misses," Leonardo Electronic Almanac 12, No. 8 (2004)
<http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n08.txt>.

WITHERSPOON, BILL. "Art as Technology," Leonardo Electronic Almanac 12, No. 6 (2004) <http://mitpress2.mit.edu/e-journals/LEA/TEXT/Vol_12/lea_v12_n06.txt>.

© 2004 The Leonardo Electronic Almanac Author Index

LEA HIGHLIGHTS 2004

January

(Part I - Groove, Pit and Wave: Recording, Transmission and Music - Nicolas Collins) Performance Space Meets Cyberspace, examines initiatives throughout the post-industrial world supporting advanced networks - Michael Bussiere • The Gallbladder Sonata is an improvisation combining sound, narrative text, Internet and live performance - Marlena Corcoran • Mediating (through) Imagination introduces two Web-based multimedia projects and live laptop performances - Trace Reddell

February

(Part II - Groove, Pit and Wave: Recording, Transmission and Music - Nicolas Collins) Recursive Audio Systems discusses the use of feedback systems in their compositional and performance techniques - Christopher Burns and Matthew Burtner • Turn/Stile provides a lively narration of his attempts to update composer Udo Kasemets' work - Tobias C. Van Veen

March

LEA thanks its peer reviewers whose significant contributions ensure LEA meets the highest academic standards and adds to the existing body of art, science and technology knowledge - Patrick Lambelet

April

"Metavirtue and Subreality" or "The Involuntary Walker as Virtuous Subject Yet Only Semi-Intelligent Agent" or "Birds or No-Ledge to Stand on", explores the effects of navigating in immersive environments - David Blair

May

The *Public News Network* (PNN), a computer-based artwork gives viewers "the power to interrogate corporate broadcast media." - Jack Stenner • Toward the Glass Bead Game, associates small images with ideas that are described in ordinary prose - Joshua Fost • Escuela Rural Andina de Cajamarca, seeks to activate the talents of rural Peru's artisans through the creation of permanent training facilities - Sabine Vess

June

Art as Technology describes artistic projects with massive geometrical designs made in remote natural settings often seemed to be connected with surprising changes in the environment and

its inhabitants - Bill Witherspoon

July

Translation, Transcodification, Transmission: Erika Tan's Pidgin: Interrupted Transmission, discusses "issues of cultural translation, digital media and notions of difference," using UK-based Erika Tan's work - Janice Cheddie

August

(Network Leaps, Bounds and Misses - Fatima Lasay)
• UNESCO's Program in the Promotion and Support of Digital Art and Electronic Music in Asia and the Pacific is designed to promote creativity in the field of digital arts - Tereza Wagner
• Recent New Zealand Electroacoustic Music discusses the role of the Sonic Art CD series in documenting electroacoustic music - Ian Whalley
• Latin American Media Art explores the various permutations of globalization - Jose Carlos Mariátegui

The Use of Internet for an International Collaborative Project describes an experimental online project between students based in Japan and Malaysia to discuss notions of self, identity, nationality and cross-cultural encounters in today's global telecommunication age - Hasnul Jamal Saidon and Roopesh Sitharan

September

The Intertextual Thread presents ways of expanding the use of hypertextual and intertextual methods to aid a number of fields, including academic research - Motti Benari, Ziva Ben-Porat, Efrat Biberman, Liza Chudnovsky, Tammy Amiel-Hauzer and Eyal Segal

October

Art by Telephone: From Static to Mobile Interfaces discusses the evolution of artworks using telephones, focussing on contemporary works using mobile phone technology - Adriana de Souza e Silva

November

(Part I: "From the Extraordinary to the Uncanny: The Unusual and Inexplicable in Art, Science and Technology" - Michael Punt)
• Biosensor And Media Art-Induced Meditation And Telepathy explores embodiment via technology and media art - Camille Baker
• Parallel Worlds in Science-Fiction Literature provides an overview of SF works dealing with parallel worlds - John F. Barber
• Shape-Shifting through Reality focuses on the cosmology of Australian aborigines and the understanding of ways the universes interact with their daily reality - Christine Morris

December

(Part II: "From the Extraordinary to the Uncanny: The Unusual and Inexplicable in Art, Science and Technology" - Michael Punt)
• Hauntings explores intriguing parallels in the development of communications technology and spiritualist practices - Peter Anders
• Media Ghosts discusses images adapted from various news media - Josephine Coy
• Spookie Cookies looks into various takes on the supernatural within the alternative media - Len Massey

Cinema and the Biological Basis of Otherness discusses

interactive cinema seen as an "externalization of mind" - Pia Tikka • Universe from Beyond makes a compelling case for the central role of "unobservables" in cosmology and physics - C. S. Unnikrishnan

LEONARDO REVIEWS 2005.01

This month, Leonardo Reviews has posted 22 reviews, covering the usual wide range of topics of interest to the art/science technology community. As always, the emphasis is driven by the curiosity of artists; a product, I think, of the different ways that professionals in the three communities deploy their time and intellectual energy. The eclecticism and particularity of the artist's mindset contrasts with the synthetic and systematic approaches in the hard sciences. Nonetheless, whether artist, technologist or scientist, a reviewer's task is, of course, to synthesize the content and provide the critical context of their topic in such a way that it is both defined and open for the reader's engagement. It is no mean task, and I am constantly amazed at the intellectual somersaults our panellists sometimes manage. This month, we are featuring three reviews that undergo even more contortion than usual, as they slip through time and space. Mike Legget, writing from Australia, includes the specifics of the London Film-makers Co-operative of the 1960s in a discussion of newer technologies. Renee Beekman, from Bulgaria, also writing on aspects of new technology, draws nineteenth- and twentieth-century French philosophy into the frame, while John Knight reviews the HCI debate through the filter of German philosophy. These, along with the remainder of the postings up to December, can be found with the archive at <http://leonardo.reviews.mit.edu>.

Michael Punt
Editor-in-chief
Leonardo Reviews

Reviews Posted December 2004:

Avatar Bodies: A Tantra for Posthumanism, by Ann Weinstone
Reviewed by Robert Pepperell

Beyond the Limits of Thought, by Graham Priest
Reviewed by Robert Pepperell

Con Brio: Karl Ulbrich Schnabel, Master Teacher of Piano, by
Mary Lou Chayes and Beverly Jones
Reviewed by Stefaan van Ryssen

Earth and Women, by Lyndol Michael, Director
Reviewed by Michael R. (Mike) Mosher

The Expediency of Culture: Uses of Culture in the Global Era
(Post-Contemporary Interventions), by George Yúdice
Reviewed by John Knight

Film Art Phenomena, by Nicky Hamlyn
Reviewed by Mike Leggett

>From Airline Reservations to Sonic the Hedgehog: A History of
the Software Industry, by Martin Campbell-Kelly
Reviewed by John Knight

Funology: From Usability to Enjoyment, by Mark A. Blythe, Kees
Overbeeke, Andrew F. Monk, and Peter C. Wright, editors
Reviewed by John Knight

The Holocaust Experience, by Oeke Hoogendijk
Reviewed by Andrea Dahlberg

The Interventionists: User's Manual for the Creative Disruption
of Everyday Life, by Nato Thompson and Gregory Sholette, editors
Reviewed by John F. Barber

Intima, 89/96-03/04, radical emotions, Intima | virtual base,
Ljubljana, 2004
Reviewed by Stefaan van Ryssen

Irrational Modernism - A Neurasthenic History of New York Dada,
by Amelia Jones
Reviewed by Andrea Dahlberg

Kiasma
Reviewed by Michael R. (Mike) Mosher

New Philosophy for New Media, by Mark B.N. Hansen
Reviewed by René Beekman

Panopticon, directed by Relja Penezic
Reviewed by Mike Leggett

Room Pieces, by Michael J. Schumacher
Reviewed by Stefaan van Ryssen

Sandcastles: Buddhism and Global Finance, by Alexander Oey
Reviewed by Stefaan van Ryssen

Satisficing Games and Decision Making: With Applications to
Engineering and Computer Science, by Wynn C. Stirling
Reviewed by John Knight

Symmetry Comes of Age: The Role of Pattern in Culture, by
Dorothy K. Washburn and Donald W. Crowe, editors
Reviewed by Rob Harle

Twilight Clones, by Robert Ziino
Reviewed by Stefaan van Ryssen

Variety Orchestra, by Brian Woodbury
Reviewed by Stefaan van Ryssen

Wayward Reproductions: Genealogies of Race and Nation in
Transatlantic Modern Thought, by Alys Eve Weinbaum
Reviewed by Michael R. (Mike) Mosher

FILM ART PHENOMENA

by Nicky Hamlyn, British Film Institute, London, 2003, 224 pp.,
illus. Trade, £48.00; paper, £16.99, ISBN: 0-85170-971-0; ISBN:
0-85170-972-9.

Reviewed by Mike Leggett, University of Technology, Sydney,
Australia

E-mail: mike [dot] leggett [at] uts [dot] edu [dot] au

Most artists and their audiences regard the film medium as both an industrial tool, delivering distraction to the local multiplex, and an art tool, delivering big, luscious moving images and sounds to the local city gallery. Except that in the gallery, and apart from art celebrities like Matthew Barney, it is not film but electronically mediated images and sounds that we encounter. Some artists' engagement with technology amounts to little more than changing the script and the performers. Film art is something apart from, and certainly has nothing to do with, art film (as I once explained at length to a customs official).

The *Phenomena* of this book's title emerges from the three section headings: "media," "apparatus" and "aesthetics," and takes a muscular approach to discussing recent artists' approaches to the phenomena of the film medium (and a bit of video). There is no separation of description suggested by these headings, as the writer moves quite freely through the polemics of issues, mainly on representation, that he and others have developed over the last 40 years.

This volume adds to the growing literature arising from the work of a group of artists centered on the London Filmmakers Co-operative (LFMC). Established in 1967 to distribute the emerging underground cinema of the time, the LFMC expanded in 1969 into a co-operative workshop, probably the first run by visual artists, to control every aspect of film production, from shooting, processing, editing and printing film, its exhibition and distribution. The group embraced the technology of film in its totality, without trying to mimic the practices of the television industry, which in the 1960s relied largely on 16mm and 35mm film mediums for recording purposes. While artists in other countries utilized cameras and editing gear, additionally in London obsolete equipment from television's laboratories was readily re-purposed, from the inside out. It was a process, more recently recognized in the academy as practice-based research, where filmmaking, reflection, peer-group evaluation and theoretical discourse were conducted within collective and individual frameworks.

Hamlyn correctly holds that as a result of this phenomenon, the films, as well as the discourse generated by the filmmakers and the subsequent effect it had on a wider debate within the international fine art and cinema communities, were significant. His contribution to the literature brings to some half-dozen the book titles specifically addressing the interventions made by the British group, which included a series of public international events in London. Along with film artists from North America and Europe, the international discourse generated, defined and invigorated the mainstream cultures of visual art and cinema.

Later in the mid-80s in Britain, this discourse would slip into an academe in flux, and re-emerge as a branch of the catch-all subject area of media studies. Unlike earlier writers, Hamlyn is not averse to making occasional reference to mainstays of cinema studies such as Hitchcock, Coppola, Kubrick and Godard.

His focus however, is on aspects of the analytical approach to filmic representation - the frame, the hand-held camera, point of view - which are covered in detail, but always through Hamlyn's descriptions of a selected range of the filmmakers' work. This can be characterized as a film practice that, through foregrounding the phenomena of the encounter for the viewer, actively engages perception and cognition as the means to bring the filmic experience into consciousness.

With acknowledgement to the earlier chroniclers and polemicists - Legrice and Gidal in particular - Hamlyn's approach is to record his responses to and subsequent thoughts about the filmmakers' work associated with the LFMC, either made or exhibited there, or distributed from the huge international collection of prints accumulated up to the end of the 90s. As one of the second wave of filmmakers who began to contribute to the developing work there in the mid-70s, Hamlyn was well placed to critically view the earlier work and assess the later and subsequent work as it passed through the various stages of emergence. This process is by no means even-handed and does not pretend to objectivity. It has the style of a journal or artist/teacher's notes of encounters with "the phenomenon."

In the opening pages of the book, the lines of demarcation are clearly drawn - the "integrity of a work's original medium," the "self-effacing machines" that are video projectors and the "sleights of hand attributable to digital trickery." He goes on: "DVD is a kind of revenge of technocracy on creative approaches that examine the specificity of the medium." Clinging to the fetishistic tendencies of the late modernists, he has a greater tendency to rush in with ill-considered and shaded paranoid judgments that fail to address the central ontological issues involved - DVD is indeed a specific medium, now being explored widely by artists around the world, which in the same way as so many of the films made in the 60s and 70s, is only failed by the artist's inability to recognize that specificity and thus the appropriate creative approach. While technology is by no means neutral, neither is the artist's role in all this.

Film, video or digital media used simply as a convenient delivery means for representational forms will continue reproducing the cultural formations that much of the work made by these film artists critiques, which includes Hamlyn both as writer and filmmaker. To assume that DVD is simply another transparent carrier is to overlook the obvious. It may not have the seriality of dust, dirt and tape dropout, but it certainly has a different set of relational possibilities worthy of investigation. Later in the book, virtual-reality researchers also come in for a drubbing from Hamlyn, continuing what is only blind vitriol, there being no discussion. Too often he leaves rhetorical questions at the end of sections that purport to address contemporary developments within digital culture. If the writer's declared interest is in film art and, to a lesser extent, video art, why bother with loose jibing at more recent developments in the moving image field of arts practice?

Experiments with installational forms of film exhibition that acknowledged the apparatus as part of the "imposing presence" of

the medium are well covered in this account. Expanded cinema was an area of particular investigation by the London filmmakers and the documentation gathered here may well be the only remaining vestiges of a truly ephemeral stage in the larger project.

The general index does not reveal any reference to Husserl et al, so anyone expecting phenomenology to be considered in the context of this title will be disappointed. There is, however, a useful index of the films cited in the text. Much of Hamlyn's descriptions of the films, how they look, and how they work encourages a desire to experience the films firsthand, and this list will make requesting a film from the distributor much easier. In most cases, since the demise of the LFMC and the relocation of its distribution collection, the Lux Holding Company in London will be able to respond to readers' requests.

NEW PHILOSOPHY FOR NEW MEDIA

by Mark B.N. Hansen, MIT Press, Cambridge, MA, 2004, 368 pp., illus. 72 b/w, 11 col. Trade, \$34.95, ISBN: 0-262-08321-3.

Reviewed by René Beekman, Sofia, Bulgaria
E-mail: r [@] raakvlak [dot] net

While reading Mark B.N. Hansen's **New Philosophy For New Media**, I increasingly realized the strangeness of a situation in which an author publishes a book under this title, with the agenda of reinstating Bergsonian bodily affection and who does that, not in the last place, thanks to digital media, despite his insisting on the digital being something inhuman, alien, not accessible. From a media art point of view, this is quite a peculiar book. I can't ignore that I am an artist, so this response in the end defined my point of view for the purpose of this review.

New Philosophy For New Media builds on the author's previous publications, extending and deepening much of what he has written there. In this review, however, I have deliberately chosen not to go into his theoretical exploration but to look at the book from a point of view of (new) media art. The reason for this approach is that I believe Hansen has a fundamental problem accepting anything that is digital, as I will show below, and this stance is reflected in his fairly typical choice of artworks featured in the book. This, too, I will attempt to explain below. It goes without saying that my criticism does not concern the quality of the artworks presented but rather their representational nature and, specifically, the role this choice has in the narrative.

Hansen's qualifications of the digital, combined with the type of artworks included in the book and those specifically rejected, leads to an interpretation of the book as an attempt to surface, or sur-face, the digital with - literally - a human face.

In the somewhat unfortunately titled **New Philosophy For New Media**, Hansen sets out to "re-inject" Bergsonian bodily affection into Deleuze's reworking of Bergson's understanding of the image. To achieve this re-injection of Bergsonian affective embodiment, Hansen interweaves three narratives:

"First: how the image comes to encompass the entire process of its own embodied formation or creation, what I shall call the digital image. Second: how the body acquires a newly specified function within the regime of the digital image, namely, the function of filtering information in order to create images. And third: how this function of the body gives rise to an affective 'supplement' to the act of perceiving the image, that is, a properly haptic domain of sensation and, specifically, the sensory experience of the 'warped space' of the body itself." (p.12)

Hansen develops his argument, as Mark Poster describes it on the back cover of the book, "in a rigorous, systematic manner." The argument is sufficiently systematic to be put in a table at the end of the introduction, listing separate columns for "Theoretical aim," "Body," "Image" and "Artwork" on a chapter-by-chapter basis. The relevant sections of this table are repeated at the start of each chapter as if to function as road-signs, guiding the reader in the right direction and reminding us of the task at hand.

In his introduction, Hansen starts by declaring the digital image as free of material dependency; it is a set of information that can be rendered perceptible through various technologies and ultimately through human embodiment. He defines the digital image as an image that "finds no instantiation in a privileged technical form" but rather "demarcates the very process through which the body, in conjunction with various apparatuses for rendering information perceptible, gives form to or in-forms information" (p.10).

Once the image is freed of its materiality, the bodily perception, and more specifically, affective bodily perception finds itself at the center of the digital image. Perhaps realizing that with this definition, every collection of random (digital) numerics becomes a "digital image," Hansen then confronts this "problematic of framing once the (technical) image has been exploded into a limitless flux of information" (p. 84) by bringing in British cyberneticist Donald MacKay and French bio-philosopher Raymond Ruyer to insist, through a looped reasoning, that information can only be information (by receiving meaning) through bodily framing, on what is nothing less than the equation of information with meaning and, as is exemplified by almost every artwork discussed in the rest of the book, with a representation of the human body.

>From there on, all the new media artworks Hansen refers to either involve physical, bodily, haptic contact between the artwork and the visitor (e.g. Jeffrey Shaw's interactive installations in several chapters in the book or the various VR installations in chapter five) or are representations of the human body (Geisler's *Dream of Beauty 2.0*, Feingold's *If/Then* and *Sinking Feeling*, *Huge Harry*, and others in chapter four, Lazzarini's *Skulls* in chapter six) or are literal representations of the bodily expression of emotions (Viola's *Quintet for the Astonished* in chapter 7). Every possible exception to this representation of the body is left out and/or discarded, along with, among others, Kittler, as "too technocratic." (See, for example, Hansen's rejection of Kessler's *Transverser* and Reinhart and Wiedrich's *TX-Transform* in chapter seven.)

In Hansen's definition of new media, the ultimate "affective

embodiment" of the digital image is Viola's *Quintet for the Astonished* (chapter seven). This work, shot using optical 35mm film at a high frame rate, was subsequently slowed down in the transfer to digital video tape to extend the representational time, and, thereby, extend the impact of several persons expressing strong emotional feelings. The slow-motion in the final piece was almost entirely achieved by the difference between frame rate at the time of recording and playback speed at the time of transferral of the film material to video tape - with only "tweaks" to the playback speed being done in the digital domain - and thus, the transformation of the image takes almost entirely place in a mechanical and optical domain.

Perhaps key to this all is Hansen's repeated insistence on the digital domain as "the radically inhuman universe of information" (p.138), "the weird logic and topology of the computer" (p. 202), "an alien space that is digital" (p. 206) and "radically uninhabitable" (p. 208), among other descriptions. In this context, his discussion of the DFI (Digital Facial Image) as a replacement of what he refers to as "the profoundly impoverished, yet currently predominant model of the Human Computer Interface (HCI)" (p. 129) becomes almost a nostalgic longing to give a more, literally human face to this "alien domain." In the process, Hansen fails to acknowledge the historical context, tradition and relevance of such work; that the works he describes in relation to this DFI (Geisler's *Dream of Beauty 2.0*, Courchesne's *Portrait No. 1* and d'Urbano's *Touch Me*) come from and refer to a history that finds its way back through early video art and experimental cinema and has everything to do with a questioning of the human relation to technological representation, and very little to do specifically with the digital. What a lot of these early video-art experiments, especially from the late 1960s and early 1970s, have attempted was an exploration of the machine and the image it produces as a physical manifestation.

Undoubtedly, for those who are interested in the purely theoretical side of the narrative, Hansen's insistence on bodily affection renders a fascinating read. However, for those of us who are interested in theories of (new) media art, this book has, despite the double-newness of its title, very little to offer. In the way that Bergson almost a century ago expressed his ideas in terms of "images" and for Deleuze a few decades ago everything was "cinema," Hansen has updated the terminology to the more contemporary "new media".

Hansen's theoretical explorations would have been more interesting from a new media point of view if he would not have shunned everything that is not a literal portrayal of the human body but would have explored Bergsonian affective bodily framing in works like, for example, Maurizio Bolognini's *Sealed Computers* - a work that consists of 200 computers connected in a digital network. Each computer generates, manipulates and forwards digital images. None of these computers is connected to an output device and consequently, none of the images will ever be seen by human bodies.

FUNOLOGY: FROM USABILITY TO ENJOYMENT

by Mark A. Blythe, Kees Overbeeke, Andrew F. Monk, and Peter C. Wright, editors, Kluwer Academic Publishers, Boston, MA, 2003,

320 pp., trade \$117.00, ISBN: 1-402-01252-7.

Reviewed by John Knight, User-Lab, Birmingham Institute of Art and Design, Birmingham, U.K.

E-mail: John [dot] Knight [at] uce [dot] ac [dot] uk

According to the back cover of **Funology: From Usability to Enjoyment**, "This book reflects the move in Human-Computer Interaction [HCI] studies from standard usability concerns towards a wider set of problems to do with fun, enjoyment, aesthetics, and the experience of use." Kluwer has published it as part of its Human-Computer Interaction Series. I was extremely skeptical of the title and worried about the ethical consequences of designing "fun" products. However, I was wrong. Fun may seem an odd subject for an academic book, but it is not a trivial issue. The content is sound, interesting, refreshing and pleasurable (fun?) to read.

Funology collects 24 papers in three sections. The first section provides a context of "Theories and Concepts" (e.g. the semantics of fun); the second part deals with "Methods and Techniques" (e.g. measuring emotion); and the final section describes nine case studies. Despite the diversity of the subject matter, the individual papers come together to form a coherent whole that is underpinned by a positive approach to researching and designing for fun. It is well-designed, with useful section introductions and an integrated bibliography. The foreword is by Patrick Jordan of the Contemporary Trends Institute and provides a useful setting for the book. Jordan suggests shortcomings in traditional human factors and HCI approaches and that pleasurable products achieve a better fit between people and products. He concludes that:

"While . . . usability-based approaches certainly tackle some very important issues, they tend to take a view of people that is somewhat limited, perhaps even dehumanizing. The problem is that they tend to ignore or de-emphasize wider aspects of our humanness. What about our hopes, our fears, our dreams, our feelings, our self-image, the way we want others to see us? All these things are associated with the emotional and aspirational levels of a person's experience with a product or service" (p. xi and xii).

Jordan is not alone in taking pleasure seriously. **Funology** is published at a time of growing (academic and commercial) interest in understanding and exploiting emotional interactions between people and products. Fortunately, rather than offering a utopian (or dystopian) future of engineered playfulness, **Funology** achieves three things. Firstly, the book gives an impartial critique of the cognitive/functional tradition of HCI. Secondly, it offers an erudite exploration of issues pertinent to expanding HCI "beyond usability." For example, Blythe and Hassenzahl consider the "Politics of Fun" and "Spectacle and Aesthetics." Taking in Samuel Johnson, they draw on Adorno and Horkheimer to investigate "The similarities between the ways in which leisure and work time were structured and monitored" (p. 93). Lastly, the book weaves theory with empirical study and design.

Chapter One looks at engagability, concluding that "Users are not interested in products; they are in search of challenging experiences. Therefore, the designer needs to create a context for experience, rather than just a product" (p. 9). Phoebe Sengers critiques Taylorism and the division between work and

fun in the context of domestic work. Wright et al. give a vivid overview of "Making Sense of Experience" based upon Dewey and Bakhtin.

The methods and technologies section starts with usability "guru" Jakob Nielsen. Pieter Desmet introduces his work with "verbal [and] non verbal instruments to measure emotion." Andersen et al. continue the emotional quotient by describing a set of innovative games from the FARAWAY project that aims to "explore how new technologies might support remote communication between people in affectionate relationships" (p. 151).

The final section is given over to case studies. A number of papers relate to museums and to engaging with children through interactives that "should be equally attractive, fun, long lasting, and yet offer sound pedagogical learning opportunities" (p. 198). Norbert Braun describes how interactive applications can facilitate storytelling and conversation based (p. 233) on Propp's "semiotic description of story structure" (p. 237). The narrative focus is maintained by Jennica Falk (p. 249) and is augmented by research into tangible user interfaces.

This is a deceptive book. It looks decidedly academic but is well-organized, with good introductions and chapter summaries. It deals with a range of prescient design issues with theoretical depth and practical examples. Instead of technological determinism, the book offers a humanistic perspective. The editors have shown respect for peoples' need for fun, but also challenge growth and well-being in their selection of papers.

ISAST NEWS

LEONARDO NETWORK NEWS: THE NEWSLETTER OF THE INTERNATIONAL SOCIETY FOR THE ARTS, SCIENCES AND TECHNOLOGY AND OF L' OBSERVATOIRE LEONARDO DES ARTS ET TECHNOSCIENCES

LEONARDO AND SAN FRANCISCO ART INSTITUTE ANNOUNCE PARTNERSHIP

The San Francisco Art Institute (SFAI), one of the foremost art colleges in the nation, and the International Society for the Arts, Sciences and Technology (Leonardo/ISAST) have announced a partnership that will bring the editorial offices of *Leonardo* onto the main campus of the Art Institute in May 2005. The announcement was made by SFAI President Chris Bratton and Leonardo/ISAST Board Chairman Roger Malina.

The partnership exemplifies a period of great investment in academic programs at the Art Institute. The school introduced four new Centers for Interdisciplinary Learning to its undergraduate curriculum this fall and also opened a new facility for artistic investigation into high-definition technology, the Ars Nova XXI HD Research Laboratory. Other SFAI partnerships created through the new centers include those with NASA, the Exploratorium, the Bay Area Video Coalition and the San Francisco Center for the Book and Arion Press.

The partnership between Leonardo and SFAI includes internships for Art Institute students, collaborations on lecture series and symposia, and other joint endeavors to be announced in coming months. The transition will be overseen by a joint oversight committee with members from both organizations.

SFAI is committed to arts education in a cross-disciplinary environment, not only between art-making media but also between the arts and other disciplines. The partnership with *Leonardo* will help provide an active framework through which students can explore new ways of looking at, thinking about and making art, while learning about science, technology, writing and history.

NEW HORIZONS AWARD GIVEN TO CRITICAL ART ENSEMBLE

The Leonardo/ISAST Governing Board has given a special Leonardo New Horizons Award for Innovation to Critical Art Ensemble (CAE). CAE are internationally acclaimed for their artistic work in such fields as biotechnology, robotics and tactical media. Their performances and installations have reached viewers around the world and have broken new ground in the often controversial area of new technologies.

The governing board voted to give CAE this special award to affirm the principle that artists should engage emerging technologies and be willing to take critical stances that may be at odds with those of the mainstream. Freedom of artistic expression and research form a part of the foundation of an open society. For more information on Critical Art Ensemble, please visit <<http://www.critical-art.net>>. For more information on the Leonardo Awards program, contact <isast [@] leonardo [dot] info>.

2004 LEONARDO EXCELLENCE AWARD JURY

The Leonardo Award for Excellence recognizes excellence in an article published in *Leonardo*, *Leonardo Music Journal*, *Leonardo Electronic Almanac* or Leonardo Reviews. Excellence is defined as originality, rigor of thought, clarity of expression and effective presentation. This year Luc Courchesne, Neora and Machiko Kusahara join Mark Beam on the jury.

LUC COURCHESNE is currently professor of design at the Université de Montréal and president of the Society for Art and Technology (SAT). Born in 1952 in Québec, Courchesne studied at the Nova Scotia College of Art and Design in Halifax and received a master's degree from the Massachusetts Institute of Technology. He began his explorations in interactive video in 1984 when he co-authored *Elastic Movies*, one of the earliest experiments in the field, with Ellen Sebring, Benjamin Bergery, Bill Seaman, Glorianna Davenport and others. He has since produced several installations, including *Encyclopedia Chiaroscuro* (1987), *Portrait One* (1990), *Family Portrait* (1993), *Hall of Shadows* (1996), *Landscape One* (1997), *Passages* (1998), *Rendez-vous* (1999), *The Visitor: Living by Numbers* (2001) and *Untitled* (2002). His work has been shown extensively in galleries and museums worldwide, including Sydney's Art Gallery of New South Wales, New York's Museum of Modern Art, Tokyo's InterCommunication Center (ICC), Paris's La Villette, Karlsruhe's ZKM/Medienmuseum and Montréal's Musée d'art contemporain. His installations are part of the collections of the National Gallery of Canada in Ottawa, the ZKM/Medienmuseum in Karlsruhe, the NTT Intercommunication Center in Tokyo and of the Museum of Communication in Bern. Luc

Courchesne was awarded the Grand Prix of the ICC Biennale '97 in Tokyo and an Award of Distinction at Ars Electronica 1999 in Linz, Austria. He is based in Montreal.

NEORA teaches cyberculture at Tel-Aviv University and virtual reality at Shenkar College of Engineering and Design. She is the designer and producer of several advanced interfaces for museum, academic and commercial web sites and the creator of Ayuni - telepresence in Nablus, NYSE-VR, a 3-D interactive simulation of a stock exchange trading floor, and *MEDEA_EX* <<http://medeaex.org>>, an immersive/interactive play performed at the Schiller festival in Mannheim, Germany, and Acco Theatre Festival 2003 in Israel. Since then, she has been experimenting with on-line worlds for remote learning and with CAVE-like installations for large audiences. Neora is involved with the open-source movement in Israel and was the organizer of the first two hacker conferences in Israel <<http://y2hack4.org>>. In the previous millennium, Neora was for several years a Unix programmer and PC support team leader in DEC Ltd and CDC Ltd and was co-founder of multiuser gaming startup SGH in 1994. She is the author of *Digital Affair* (Hakibutz Hameuchad publishing, 1993), journalist, editor and columnist in professional magazines and newspapers. See <<http://www.neora.com>>.

MACHIKO KUSAHARA is a media art curator and a scholar in the field of media studies. Her recent research has been on correlations between digital media and traditional culture. Based on her knowledge in the fields of science, technology and art history, Kusahara analyzes the impact of digital technologies and their background from a cultural point of view. Her recent publications include analysis of Japanese mobile-phone culture, game culture and visual media. She has published internationally in the field of art, technology, culture and history, including 16 laserdiscs on computer graphics, and has contributed to books including *Art@Science* (Springer) and *The Robot in the Garden* (MIT Press), among many others. Projects on which she has collaborated in the fields of net art and virtual reality have been shown at SIGGRAPH. She has curated digital art internationally since 1985 and was involved in founding the Tokyo Metropolitan Museum of Photography and ICC. Kusahara has also served on juries for international exhibitions, including SIGGRAPH, Ars Electronica, LIFE, and the Japan Media Arts Festival. Kusahara holds a PhD in engineering from the University of Tokyo. She is currently a professor at Waseda University and a visiting professor at UCLA. See <<http://www.f.waseda.jp/kusahara/>>.

LEONARDO NETWORK NEWS COORDINATOR: Kathleen Quillian
E-mail: <isast [@] leonardo [dot] info>.

OPPORTUNITY

Director, Institute for E-Learning and Research in the Arts and Design, College of Arts and Architecture, The Pennsylvania State University

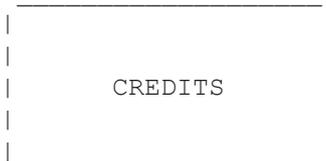
The director of the new E-Learning and Research in the Arts and Design initiative in the College of Arts and Architecture at Penn State shall be responsible for providing leadership and overall coordination of digital imaging and technology in the arts and design in three primary areas: 1) online instruction, 2) stimulating research in these allied fields, and 3) grant writing/fundraising to support the projects of the Institute.

The mission of the Institute is to take a leading position in the future of the disciplines represented in the College of Arts and Architecture in the global advancement of digital practice, implementation and research.

The director shall supervise a staff comprised of two instructional designers, an online course manager and clerical staff and shall be the primary point of contact for the Institute. The director shall serve as the liaison with the academic leaders of the college, shall establish and/or build upon internal and external collaborations in the areas of e-learning and research in digital technologies in the arts and design, and shall be responsible for proposal development for external support of research in these areas.

For application details, a more complete position description and information regarding this initiative, please see website: <http://www.artsandarchitecture.psu.edu/e-learning/>

Penn State is committed to affirmative action, equal opportunity and the diversity of its workforce.



Nisar Keshvani: LEA Editor-in-Chief
Patrick Lambelet: LEA Managing Editor
Michael Punt: LR Editor-in-Chief
Andre Ho: Web Concept and Design Consultant
Roger Malina: Leonardo Executive Editor
Stephen Wilson: Chair, Leonardo/ISAST Web Committee
Craig Harris: Founding Editor

Editorial Advisory Board:
Irina Aristarkhova, Roy Ascott, Craig Harris, Fatima Lasay,
Michael Naimark, Julianne Pierce

Gallery Advisory Board:
Mark Amerika, Paul Brown, Choy Kok Kee, Steve Dietz, Kim Machan

fAf-LEA Corresponding Editors:
Lee Weng Choy, Ricardo Dal Farra, Elga Ferreira, Young Hae-
Chang, Fatima Lasay, Jose-Carlos Mariategui, Marcus Neustetter,
Elaine Ng, Marc Voge

LEA
PUBLISHING
INFORMATION

Editorial Address:

Leonardo Electronic Almanac
407A, #24-17
Fernvale Road
Singapore 791407
E-mail: lea [@] mitpress [dot] mit [dot] edu

Copyright (2005), Leonardo, the International Society for the
Arts, Sciences and Technology
All Rights Reserved.

Leonardo Electronic Almanac is published by:
The MIT Press Journals, Five Cambridge Center,
Cambridge, MA 02142
U.S.A.

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

< Ordering Information >

<http://mitpress.mit.edu/catalog/item/default.asp?ttype=4&tid=27&mode=p>

Leonardo Electronic Almanac is free to Leonardo/ISAST members and
to subscribers to the journal Leonardo for the 2005 subscription
year. The rate for Non-Leonardo individual subscribers is \$35.00,
and for Non-Leonardo institutional subscribers the rate is
\$77.00. All subscriptions are entered for the calendar year only.

All orders must be prepaid by check (must be drawn against U.S.
bank in U.S. funds), money order, MasterCard, VISA, or American
Express. Where student subscription rates are available, a
verification of matriculant status is required.

Note: In order to place orders electronically, you must be using
a browser that is SSL-compliant. If you are unable to open the
ordering link listed above, then your browser does not support
the security features necessary to use this interface. Please use
the addresses below to submit your order. Address all orders and
inquiries to:

Circulation Department
MIT Press Journals
Five Cambridge Center
Cambridge, MA 02142-1407 USA
TEL: (617) 253-2889 (M-F, 9-5)
FAX: (617) 577-1545 (24 hours)

For queries contact:
journals-orders [@] mit [dot] edu (subscriptions)

|
| ADVERTISING |
|

Leonardo Electronic Almanac is published monthly -- individuals and institutions interested in advertising in LEA, either in the distributed text version or on the World Wide Web site should contact:

Leonardo Advertising Department

211 Sutter Street, Suite 800
San Francisco, CA 94108
phone: (415) 391-1110
fax: (415) 391-2385
E-mail: isast [@] leonardo [dot] info
More Info: <http://mitpress2.mit.edu/e-journals/Leonardo/isast/placeads.html#LEAads>

|
| ACKNOWLEDGEMENTS |
|

LEA acknowledges with thanks the Rockefeller and Ford Foundations for their support to Leonardo/ISAST and its projects.

< End of Leonardo Electronic Almanac 13 (01) >
