

Experiential Art: Case Study

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Introduction

The world surrounds us, and our experience of it depends both on what is going on and what we are up to. For many artists and experimenters the challenge arises when, looking around for inspiration, we attempt to materialise our vision with the means available to us.

This is hardly new. To some nineteenth-century painters and photographers who had, as Oettermann suggests, "discovered" the horizon (1), it must have seemed natural to abandon the frame and its imposed point of view — familiar in painting — for a wider, horizontally unedited form of visual representation. Introduced by Aston Barker in Glasgow in 1783, the panorama and its offshoots were at the forefront of imaging development throughout the next century and remained a popular attraction until cinema was introduced. The theatrical presentation of moving images suddenly drew the crowds away from the rotundas displaying the still panoramas.

By the turn of the twentieth century, the new generations of entrepreneurial image-makers had abandoned, out of sheer technical difficulty and for economic reasons, the project of developing a cinematic panorama and made do with the frame's imposed point of view. They were to spend the next hundred years crafting the language of the cinematic experience and expanding its narrative form. (2)

Cinema evolved its unique way of telling stories, yet it never really questioned the basic architecture it had inherited from the theatre, with the audience facing the stage. Nevertheless it appears to have kept alive the plan of growing more immersive. This is exemplified, for example, by Abel Gance's multiple-screen feature film *Napoléon* in 1926, or by Waller's Cinerama in the fifties and today's Imax and Omnimax technologies.

In parallel, computing technology has brought about new ways of creating, manipulating and displaying images and sounds. Its capacity to input, process and output data has given birth to the notion of real-time interactivity and of viewer/audience participation. The birth and rapid growth of the computer game industry is certainly one bold outcome; so is the work of a broad base of artists and experimenters stemming from visual arts, music, performance or cinema who have concurrently, since the late seventies, explored and questioned the potential of interactivity and measured its implication for a spectator turned user or visitor.

The computer is also fostering new expressions of the nineteenth-century quest for the ultimate panoramic experience — through QuickTime VR and other flavours of immersive, still or moving, imaging techniques. There is a host of devices going from the head-mounted displays or moving windows — for the generation in real time of a view of a computer model or of a portion of an immersive picture — to a rapidly growing number of micro-environments that immerse visitors in the video or data content.

In light of all of this and of our fast-changing cultural landscape, I would say that the media artists who are doing installation work are at the forefront of those formulating a medium which impact in the future will be comparable to that of cinema in the not-so-distant past. This medium will be built around three basic features: the interactivity and the connectivity coming from late twentieth-century computer and networking technologies, the moving image inherited from cinema and television and the form of immersivity created by the panorama artists of the early nineteenth century.

My work has been leading in that direction since the mid-eighties. In this article I will look at the structures of content and interaction that have evolved from it, and will illustrate the challenges of using the computer creatively and of working toward an aesthetic of interactivity and immersivity. I will also

explain why, in my opinion, it is not appropriate to speak of narrativity in relation to an interactive work.

Experimental storytelling

When looking for a voice of my own in the early eighties, my models were visual artists and experimental filmmakers in the likes of Michael Snow, Stan Brackage, Hollis Frampton, and Robert Frank. They showed me the level of freedom that could be exercised over a seemingly contrived and coded medium such as film, but it would have been impossible for me to follow in their footsteps; as of the mid-seventies, the affordable video had displaced film as the medium of choice for experimental work. My initial intention in using video was to work at crafting linear transformations and to see how I could alter the experience of space in my installations. But the medium became truly useful to me when I discovered it could be manipulated and reconfigured in real time.

At first editing was what attracted me the most: One side of me wanted to be handcuffed, curious to find out what happens to the initial concept when all the time-based decisions are made prior to shooting. This strategy led to single-sequence videos such as Bob Rosinsky's *Sister* (1982), *Paula* (1983) or *Past and Future Wheel* (1983); the other side leaned toward the opposite extreme: a movie of broken bits offering endless editing possibilities. Originally when I asked my colleagues at the MIT Film/Video Section to tell the story of Goldie Locks to the camera for *Twelve of Us* (1982), I simply wanted to gather material, a collection of reconfigurable bits of video, in order to compose a poetico-surrealist story of my own. The idea proved impractical but the process pointed to the concept of an automatic storytelling machine, a movie structured as a deck of cards being reshuffled for every viewer.

This happened shortly after I saw a demo of the laserdisc-based *Aspen Movie Map* (3). Several months later, in early 1984, some of us at MIT embarked on a group project titled *Elastic Movies* where we were to experiment with computer-controlled laserdiscs and explore storytelling in an interactive authoring/viewing environment. The work was completed in the fall of 1984 and premiered in 1985 for the opening of the Media Lab. What we then called poly-linear storytelling or re-configurable video was renamed shortly after interactive video, which has been the realm of my experimentation, expression, and art ever since. With computer control of video sources in real time, I could reconcile both sides of my early videographic taste for carefully defined concepts and endless editing.

The form of information

Breaking the material into bits and pieces is worth little to me unless there is some sort of underlying structure and mechanism. My first interactive solo project, *Encyclopedia Chiariscuro* (1987) was an experiment in hypervideo. The content was divided into four parts, which represented my own cosmogony: people, places, ideas and light. These parts were then organised into a virtual object, made

of nodes and links, which was designed to be manipulated in real time.

My intention was to use and interpret the visitors' movement, using an infrared sensor placed in front of the screen, to navigate within this structure and to form a video stream in real time from a substantial bank of video sequences related to each of the four poles. As a result, each visitor conducted her/his own personal exploration of this cosmogony. Stillness was, for example, interpreted as interest and produced a continuity in the "story line". On the contrary, movement broke this continuity, as if the program were trying to regain the visitor's attention.

The authoring shell developed for this work — programmed in C by a collaborator — allowed me to define video sequences, and their order in as many screen sets as needed. I could thus determine what the program would do after playing the sequences of a particular set — loop or go to a new screen set; I could also define what would occur within a particular sequence if an event had been detected — go to the beginning of the screen set or jump to another set. This allowed me to create situations where, for example, a character lost in reverie on screen reacted to someone entering the room.

Noticing that their movements impacted on the succession of images, visitors generally engaged in a sort of dance with the installation. To relieve the frustration felt by a good number of them who wished for more control, I added a push button that instructed the program in the way the infrared sensor did. From reactive the installation became participatory. As a result, the work began to be understood as a kind of scratch-video apparatus meant to be brutalised.

In all interactive work with input and output devices addressing the spectator turned visitor, a more or less immersive space is defined. Minimally, it may consist of a bare computer, but in most cases an attempt is made at integrating equipment, content and visitor into a coherent environment. In *Elastic Movies*, the environment is that of a corridor where a passer-by is invited to respond via a keypad to voiced orders being cast from a piece of furniture. In *Encyclopaedia Chiaroscuro*, the screen is enlarged with the result that the visitor is somewhat dwarfed. From an object to be manipulated in *Elastic Movies*, the installation is redefined in *Encyclopaedia Chiaroscuro* as a space in which the visitor is invited to enter.

This project taught me the importance of building familiarity into the interactive piece so users feel comfortable with how to think and behave in relation to it. As I was embarking on a new project, one question kept surfacing: What metaphor could help integrate technology and content so that visitors would be drawn to engage immediately with the work? *Portrait One* (1990) was an attempt to answer it.

Paying respect to old habits

I had read somewhere that the human face is the image most easily recognised and the one for which we have, in any culture, the widest and most subtle range of interpretations. Equally familiar to us is conversation, an essential survival skill and something we learn and practice from a very early age. So it seemed obvious to me that, given the limits of interactive techniques and the attraction computers and related technologies have on people, a computer-based work that strove to graduate from a mere

machine display towards an experience rooted in aesthetics, and perhaps even in art, needed to carry a bold content. I thus undertook to craft a virtual persona with whom one could have a conversation and possibly build a relationship. By deciding to revisit a perennial art form, the portrait, I hoped to also demonstrate that computer-based art could be considered art tout court; after sculpted, painted and photographic portraits, there could well be a new form of portraiture based on interactive video in which fragments of behaviour recorded from a real human being are used to create the impression of an encounter.

The interaction between the character played by actress Paule Ducharme and her imagined conversation partner was written prior to the recording as a series of linear developments: "Hello!"; "Do you have a minute?"; "What is your name?"; "What are you doing here?"; etc. I used HyperCard as an authoring tool (4): Questions addressed to the character are grouped on "cards" by sets of 2 to 4; each question is a "button" linking to another "card" that defines and plays a video sequence related to the question; this video "card" is in turn linked to another "card" showing a new set of questions. After ending a particular development, I could step back a few "cards" and imagine alternative questions (attitudes) with their own development. For instance, in formulating the second or third question on a card, I imagined the visitor in a different mood or another visitor altogether.

The editing process lasted well after the work was premiered in February 1990. Exhibiting the installation to different audiences systematically inspired changes and additions to fine-tune the interaction between the character and visitors. The final version of the installation includes 6 languages that were added as the work travelled. The work was later adapted for CD-ROM and DVD-ROM (1995, 2002), and the Web (2001).

This process of building complexity through addition makes it almost impossible to visualise the structure of the work other than in a very schematic way. In Portrait One, every interaction starts and finishes with the character looking away, apparently absorbed in its thoughts. Any line of interaction will take the visitor through some of the content, explore some of the topics and define some kind of relationship; and no matter what, it will always end with the character returning to contemplation. One ironic measure of success felt by visitors with the character in Portrait One has been how long can one carry the conversation before being "dumped". In fact, not unlike in real life, showing sensitivity for the character usually creates more room for conversation, which translates into topics better developed, and longer conversations.

Overall, the installation has been successful in shifting the debate from the technology used, to the aesthetics of interactivity. Because the metaphor of conversation is so strong, once a visitor accepts to suspend disbelief, the work's imperfect mechanics and crude interactive mode are forgotten and the experience remains consistent and coherent no matter what happens. You could always blame the woman portrayed or yourself for any oddity, and the limit of her scope could be attributed to an attitude. The character's attitude is in fact technology-based. With such a structure and the limits of laserdisc or computer memory, it was not possible to keep adding on, and some lines of development simply had to be closed. This translates into the character's tendency to shut itself off to certain topics and visitor's advances.

The positive response to Portrait One encouraged me to further develop the concept of conversation-based human-computer interaction. In Family Portrait (1993), in order to strengthen the illusion of a growing relationship between a character and a visitor, I added "levels of intimacy" to the conversational structure. At first, the questions are general and quite banal (level 1); then, after proper introductions (transition 1/2), the discussion develops to cover what the character does, how it does it and perhaps what its motivations and beliefs are (level 2). As the conversation edges into personal considerations, the character will test the visitor to decide whether or not the conversation should go any further (transition

2/3). In the affirmative, the character will likely accept to discuss very personal issues and show its feelings (level 3); at that point, if its mood (generated at random) is properly dealt with by the visitor (transition 3/4), the character may end up confessing something he or she "never told anyone" (level 4) and this ends the encounter. I used this canvas to conduct interviews with my subjects in documentary portraits.

Grouping characters to create virtual societies also helped strengthen the illusion of presence in my installations work. Some of these societies were constructed as documentaries from interviews with real people such as in Family Portrait, and others were written as fictions such as Hall of Shadows (1996).

The eight characters in Family Portrait can be addressed individually but to get a sense of who they are in relation to one another, you have to meet with several of them. In the process, the structure of the group becomes apparent and produces an account of what it was like to live in Marseilles in the summer of 1992.

In Family Portrait, I achieved limited interaction between the characters when left to themselves or when, in the course of the conversation with a visitor, a topic of particular mutual interest surfaced. This gave me the idea to create a fictional work, constructed more like a theatrical play. This time, with a fully developed technique for orchestrating interactions between the different stations, the four characters are given a life of their own and made to appear quite content to be amongst themselves until visitors, approaching them tactfully, point to the limits of their existence. From this moment on, the four characters seek to escape and ask the visitors to help them to this end. If in all my interactive work, the visitor's experience typically ends with their decision to leave, there is this time a definite end that can be attained when the installation shuts down for a moment... before it resets and the characters return to their initial life. To get to this point, visitors have to understand the idea, implicit in the title "Hall of Shadows", that the characters are actually their own shadows.

In Hall of Shadows, I accumulated data on a particular conversation between a visitor and a character to construct a context for the encounter; the character is made to remember this data for use later as the dramatic line develops. This feature made it possible, for example, for a character to "know" the name, sex, age, origin and occupation of a visitor and to use this data when introducing this visitor to other members of the virtual group.

Portraits and landscapes

Besides developments of the conversational structure, the technique I used to display video images further helped enrich the experience of an encounter between visitors and virtual characters. In Portrait One, instead of placing a monitor in front of the viewer, I used glass to reflect the video image in space. This was originally designed in order to superimpose the computer and video screens and to create a single visual object for the viewer. It turned out that watching the video reflection instead of the source image lessened the reference to video and television and enhanced the impression of the character's presence. It thus helped transform the installation into a conversational space.

From the single character in Portrait One, I built Family Portrait around four stations defining a space

that was intended as a forum where the society of visitors met with a society of virtual beings. When the dynamics and connections between the virtual characters became apparent, visitors were often forced into a similar interaction amongst themselves. I expanded on this idea in *Hall of Shadows* by making this interaction amongst visitors a condition for the development of the plot. I also used video projectors to enlarge the representation of characters and show more of their body. As in the previous portrait installations, I reflected images on large glass plates to give the impression that both visitors and virtual characters inhabited the same museum gallery. This approach to installation, sometimes referred to as augmented reality, is interesting in that it achieves a good degree of immersivity without the expense of covering the whole space with images.

In *Passages* (1998), visitors can convince the characters, four New-Zealanders, to take them to one of their secret and favourite places in and around Wellington. This piece, which I started to develop in 1996, was my first attempt to take the action outside of the confines of a gallery. For this work, which featured both people and landscapes, I used reflection on glass plates and favoured the ghostly presence of the characters to the continuity of the landscape, with the result that the two sections of the panorama are significantly split apart.

Passages, a two-channel 180° panorama, is a transition work that leads right into *Landscape One* (1997), a four channel 360° panorama. This time, the space is the main subject, and exploring it is the goal. The encounter with virtual characters remains though: to walk around and explore, visitors have to be invited by characters turned guides. In *Landscape One*, each character represents a strategy about exploring the garden in which the action takes place, and its journey is coloured by the type of relationship it has with visitors. The space is thus more metaphorical than real and the language used to navigate mostly points to relationships and attitudes in life.

The work is constructed as a loop of about 12 minutes representing a 24-hour cycle. In this artificial day, the same things always happen at exactly the same time: Right after sunrise, a partying couple walks through the scene, set in a public park right in the centre of Montreal; later in the morning, a jogger with his dog passes by; around noon, a family comes for a picnic until a mid-afternoon thunderstorm chases them away; when the sun finally shines again in early evening, a woman returns to pick up the bag she had left and disappears before sunset; at night one can hear that there is a lot of action around, without really seeing anything of course. Any of these characters can be hailed and talked-into taking visitors somewhere. When that happens, the whole installation space moves the visitor along the path defined by their guide. All the scenes were recorded using four simultaneously running cameras, edited into four video channels and played in synchronisation to appear as a single and coherent 360° image.

As in the previous interactive four-channel work, *Landscape One* allows up to about 12 people in at the same time, with interaction shared between the four stations. This time, I used four rear-projection screens, instead of the usual glass reflectors, to make a quasi-closed space and create a better sense of immersion. The experience highlighted the challenges and rewards of panoramic imaging and, for the next project, I was ready to embark on a blind date with anything that could make the production of interactive video panoramas simpler and more affordable, both to produce and to exhibit.

The construction of experience

In my earlier work, I always tried to give visitors a sense that they were in an environment, rather than in front of a screen. But there is a threshold when augmented reality becomes really augmented and redefines the experience of space. This threshold is determined, for a visually driven species such as ours, on how much is offered to the eye. If the use of darkness or of the hidden, which draws on visitor's imagination to fill the space, are wonderful devices to this end, we have come to expect the wealth that immersive visual information provides.

Since Portrait One I have been using ceiling mounted screens with reflectors underneath for the presentation of characters. Starting with Family Portrait, I've arranged these screens and reflectors to suggest a sort of interior space in which visitors have to inhabit to come to experience the work. In Passages, I tried to use the same technique without succeeding in reducing the gap between the two reflected images to an acceptable point. This is why I used rear projection in Landscape One.

As I embarked on a new installation project in the Summer of 1999 and started looking for a way to produce a seamless single-channel panoramic viewer, I had the idea, after testing several other options, of merging the four screens and reflectors used in previous work and of morphing their flat surfaces into a disc for a screen and a cone for a reflector. A disc-shaped anamorphous video image of a panorama as the one produced by commercially available lenses (5) could thus be projected directly onto this circular screen placed above the head of the viewer and the perspective restored by reflection to make the image visible from inside.

The initial tests in October 1999 showed the concept to be workable, and I spent the next couple of months refining it and building a prototype introduced at Siggraph in July 2000 as the Panoscope 360° (6). The simplicity and affordability of such a technique for authoring and presenting immersive and interactive content would at last allow for single-user or small-group types of installations, a clear advantage in any interactive environment where visitors often need to understand the cause of triggered events.



With new input modes such as voice recognition becoming practical and affordable, a viable personal interactive and immersive authoring-delivery platform could be widely put to use. This is why the concept for the Panoscope 360° had to include a recipe for recording, authoring and presenting interactive panoramic content. Its adoption would mean the launch of a repertoire of "panoscopic" works.

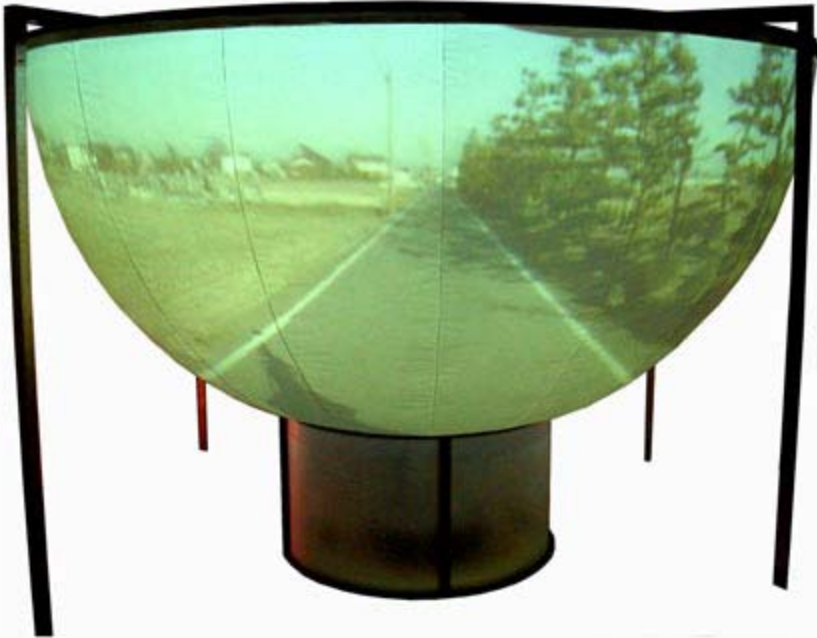
The first project I had for the Panoscope 360° was a sort of "movie map" titled Space by Number (2000). The piece uses voice for input: once inside the device, a visitor navigates a space by calling numbers appearing at decision points. The next project titled The Visitor: Living by Number (2001) was inspired by Passolini's film Theorema and by a dream my daughter had when she was 10.

In the installation, visitors are planted somewhere in the Japanese countryside. From there they will try to make a life for themselves by saying any number between one and twelve to indicate the direction they want to go or to show interest in people and what they have to say — the numbers are from a dial at the base of the dome. Exploring the territory, happening upon and entering a shelter, meeting and dealing with the inhabitants and gaining status within the group will define a visitor's experience. Leaving the place and the inhabitants to themselves (as in Passolini's film) or being forced to escape after an earthquake (as in my daughter's dream) will further characterize the visitor's experience.

Another feature of this new work is the spectacular simplification of the hardware it requires : a Macintosh G-4 computer, a microphone and a SXGA data projector with a panoramic reflector (Panoscope 360 — First edition), or with an hemispheric lens and a projection dome (Panoscope 360 — Second Edition).

As in previous works, the authoring-delivery software was developed in HyperCard where sequences are defined, as well as the action points and the vocabulary for the voice recognition software. The voice recognition uses the standard PlainTalk resources from Apple's operating system.

The work premiered on August 19, 2001 at the Art Gallery of New South Wales in Sydney (Australia) as part of an exhibition titled Space Odysseys.



New perspectives?

Interactivity and immersivity have been important keywords for a good ten years in the circles of media artists working with installation. It is also widely accepted that the current computer interface is not the information display we need to reach the full potential of interactive media. Cinema and television are good storytelling devices, but will always fall short of providing a believable interactive experience. In my opinion, cinema couldn't become immersive without a deep transformation of its content's structure and development, and if it did it would have to be called something else. By definition, and as demonstrated by early nineteenth-century panorama work, in expanding the field of view, immersive imaging frees the viewer's body in multiplying the possible points of view; choosing what to look at amounts to picking a subject and making something of it. Any immersive medium is thus by nature interactive and transforms spectators into visitors.

As I suggested earlier, it is not appropriate to speak of narrativity in relation to the construction and experience of an interactive work. The way I see it, the only narrative, if it materialise, will originate from the visitor after she or he experiences the work and not from the work itself, which is constructed as a context for experience.

Panorama artists of the nineteenth century introduced immersive imaging and artists/engineers of the late twentieth century developed data manipulation and interactive techniques. Cinema was born out of a practical technique for creating moving images and proved that the right form/content formula can find its audience and grow into an industry. The combination of the three things (immersivity, movement and

interactivity) should be the basis of the next mass medium and the cultural expression of a society looking to mark its entry into the 21st century. The importance and scope this medium could take would be further augmented by the possibilities that networks offer to break the isolation of single computers and their users. Machine intelligence, always falling short of visitors' expectations, is advantageously replaced by human intelligence, sensitivity and unpredictability.

The challenge that all artists and experimenters involved with computers and networks is now facing is similar to that of the Lumière brothers and Edison a hundred years ago, and of Barker (7) a hundred years before that: a formula that perfectly integrates today's medium, content and participants has to be invented and developed. We will then have the basis of an art and media industry turning spectators into a visitors and the storyteller into an author of worlds in which visitors are invited.

Is this a recipe for games? Games, like art, more often than otherwise find their inspiration in life. With today's technologies, interactivity and connectivity are very visible and often awkward. In time, as humans/machines, and humans/humans systems of exchange develop in richness and fluidity, the notion of levels of interactivity, or of distance, will disappear and be replaced, it is to be hoped, by discussions on pleasure, beauty and the aesthetics of experience.

At one point in regards to interactive artworks, artists/authors will make the difference between games and art. Asking that question simply demonstrates that one hasn't yet seen the D.W. Griffith, Orson Welles, Bunuel, or Passolini of experiential art.

(1) Stephan Oettermann. *The Panorama: History of a mass medium*. New York: Urzone (1997), 408 p.

(2) There have been a few examples of cinematic panoramas, most of which turned out to be technical and economic failures. The balloon ride presented at the Paris world's fair in 1900 took an audience of about 100 people up and around Paris. The story goes that the show was definitely cancelled after 3 showings when a projector operator died from the explosion of the power plant specially built for the installation. Before that, so-called "moving panoramas" representing, for example, a journey down the Mississippi river had been successfully developed and toured in the US and Europe. The authoring and display technology was nevertheless too difficult and costly to maintain and operate.

(3) The Aspen Movie Map is an interactive video installation recreating the experience of driving through the city of Aspen (Colorado). It was created between 1979 and 1982 by a research team from MIT's Architecture Machine Group and the Film/Video Section under the direction of Nicolas Negroponte.

(4) HyperCard is an authoring tool, the first one of its kind, introduced by Apple in July 1987. It allows people with limited programming skills to design applications. HyperTalk, its programming language, can be embedded into objects in HyperCard to perform almost any operation. I've used it as a primary authoring and presentation shell in all my interactive video work since 1989. It incorporates for example video controllers for the laserdisc-based projects or the current QuickTime DV and HD projects. From the beginning, I used it to display the questions allowing visitors to "communicate" with the characters and to play the

characters' response. Later on, I used it to remember a few things about the conversations and build a context where characters can be made to look more sensitive to visitors and where a particular relationship can "grow". I also used it as a network management tool to have any number of virtual characters behaving as a group.

(5) The Remote Reality panoramic lens is designed for making single shot QuickTime VR still images. I have used the same lens on video cameras. [www.remotereality.com].

(6) Information on the Panoscope 360 can be found at [<http://panoscope360.com>]

(7) Robert Barker is recognized as the inventor of the panorama. His first work featuring the city of Edinburgh was completed in 1789.

Notes on selected works by the author



Elastic Movies

(1984)

Interactive video installation for computer with keypad, laserdisc player and video monitor. Created at MIT's Film/Video section by Benjamin Bergery, Luc Courchesne, Ellen Sebring, Michael Roper, Bill Seaman, Peter Roose, Russ Sasnet, Rose Gershwin and Karin Hrechdakian. Original version in English.

Four experiments in interactive video :

Thirst

Original idea and direction: Luc Courchesne and Ellen Sebring

Photography: Michael Roper

Dance Haiku

Original idea and direction: Bill Seaman and Peter Roose

Picture Piano

Original idea and direction: Benjamin Bergery and Karin Hrechdakian

Marital Fracture

Original idea and direction: Rose Gerstein and Russ Sasnet

General credit titles:

Project coordination: Benjamin Bergery

Video editing: Benjamin Bergery

Laserdisc mastering: 3-M Optical Recording (Menomonie WI)

Programming of the authoring software: Russ Sasnet

Design and construction of the installation: Luc Courchesne

Thanks to Gloriana Davenport and Ricky Leacock

Exhibitions:

MIT MediaLab, Cambridge MA (October 1984)

PRIM, Montréal (May 1991)

Owners of the work:

Collection of each artist



Encyclopédie clair-obscur / Encyclopedia Chiaroscuro

(1987)

Interactive video installation for computer with motion detector and push button, laserdisc player and video monitor. Created in Montreal and Boston between 1985 and 1987 with help from the Canada Council for the Arts. Original version in French and English.

Collection of short video sequences on light, darkness and human behavior. The movement of spectators is used to edit the program into a hypervideo experience.

Credit titles:

Original idea, direction and production: Luc Courchesne

Programming and photography: Jason Levy

Music and soundtrack engineering: Pierre L'Abbé

Mastering of laserdisc: 3-M Optical Recording (Menomonie WI)

Exhibitions:

Boston Film/Video Foundation, Boston (February 1988)

Grey Art Gallery, New York (November 1988)

PRIM, Montreal (April 1989)

Galerie de l'UQAM, Montreal (May 1989)

Owner of the work:

Collection of the artist

**Portrait no. 1 / Portrait One**

(1990)

Interactive video installation for computer with touchpad, laserdisc player and video monitor. Created with support from the Canada Council for the Arts. Original version in French; the English, German, Italian, Dutch and Japanese versions are subtitled.

Marie, a French-speaking Montrealer in her thirties played by actress Paule Ducharme, appears to be lost in reverie. You may try to get her attention: when selecting "Excuse me..." on the display, Marie suddenly stares at you; then, selecting "Do you have the time?", "Are you staring at me?" or simply

"May I ask you something?" starts a conversation that will develop according to visitor's curiosity or Marie's moods. The encounter may be cut short due to a lack of tact or interest, or it may develop into intimate considerations about love in the context of a virtual relationship. The conversation may be conducted in French, English, German, Italian, Dutch or Japanese. In all languages except for French, Marie's answers are subtitled.

Portrait One explores portraiture in the age of hypermedia and virtual reality. After the painted portrait synthesizing the author/model experience into a single image, and after the photographic portrait capturing the instant, the hypermedia portrait looks at the subject to capture, this time, fragments of behavior that will be used to reconstruct the mechanics of conversation. In hypermedia portraits, the visitor's point of view and attitude becomes an intrinsic part of the work as the encounter between the artist and the subject is re-enacted.

The installation requires a Macintosh computer equipped with a serial port (originally a Macintosh SE/30), a touchpad, a Pioneer LD-V 8000 laserdisc player, a 27" video monitor and a pair of amplified speakers. The monitor is encased facing down in an arch-like structure above a pedestal housing the computer/touchpad. The pedestal is also used to position the glass reflecting plate at 45° directly underneath the video monitor. The authoring/delivery software was developed on HyperCard and can be played on MacOS 6.8 or later. The NTSC video sequences totaling 30 minutes are stored on a single CAV laserdisc.

Visitors use a touchpad to move the cursor about the computer screen and select questions from imposed lists. The questions are HyperCard buttons sending commands to the laserdisc player via the computer's serial port. Video sequences from the laserdisc are displayed on a monitor facing down above a tilted glass plate positioned at eyelevel. The viewer looking into the glass plate sees a reflection of the video image (virtual image plane) through which the text (set of questions) from the computer screen is visible. The characters have been recorded on a black background; once reflected on glass, the video image thus loses its edge and the characters appear as ghosts inhabiting the real gallery space.

For the CD-ROM, DVD and WEB versions of Portrait One the contents of the computer screen and of the video screen have been merged; the program is cross platform and plays on any standard personal computer. The CD-ROM and DVD versions have been developed in Director and the Web version uses the Shockwave plug-in on any recent browser.

The installation Portrait One has been created in Montreal between September 1988 and February 1990 with support from the Canada Council for the Arts.

Credit titles for the original installation version:

Concept, script, direction, programming, design, production: Luc Courchesne

Script, acting: Paule Ducharme

Camera, photography: Jason Levy

Created with support from the Canada Council for the Arts

© Luc COURCHESNE, 1990

Credit titles for the CD-ROM adaptation:

Art direction: Luc Courchesne

Concept, programming: Volker Kuchelmeister

Production: ZKM/Karlsruhe

Created with support from the ZKM/Karlsruhe

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Credit titles for the on-line WEB adaptation:

Art direction, production: Luc Courchesne

Concept, programming: Etienne Desautels

Created with support from the Daniel Langlois Foundation for Art Science and Technology.

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Exhibitions:

The original interactive video installation for computer with touchpad, laserdisc player, video monitor and arch was previewed in TED2, Monterrey, CA in February 1990 and officially premiered at PRIM in Montreal in March 1990.

TED2, Monterey, California (February 1990)

PRIM, Montréal, Québec (April 1990)

Center for Art Tapes, Halifax, Nova Scotia (November 1990)

IMEREC, Marseille, France (December 1990)

Cinématheque québécoise, Montréal (February 1991)

Obscure, Québec, Québec (March 1991)

PRIM, Montréal, Québec (May 1991)

Siggraph, Las Vegas, Nevada (July 1991)

Festival du cinéma québécois, Blois, France (October 1991)

D&MS, Franckfort (October 1991)

Centre d'exposition des Gouverneurs, Sorel, Québec (November 1991)

NDES, Chicago, Illinois (February 1992)

TISEA, Sydney, Australia (November 1992)

AIGA, New York, New York (February 1993)

Small Worlds, Gainesville, Florida (March 1993)

MuuMediaFestival, Helsinki, Finland (April 1993)

National Gallery of Canada, Ottawa (November 1993 - January 1994)

Artifices 3, Paris (November - December 1994)

MultiMediale 4, Karlsruhe (May 1995)

Triennale di Milano, Milan (May - June 1995)

Interaction 95, Gifu, Japan (July 1995)

Foto Biennale Enschede, the Netherlands (September 1995)

World Wide Video Center , La Haie, the Netherlands (December 1995 - January 1996)

Tournée des Maisons de la culture de Montréal (January - December 1996)

Musée des Beaux-Arts du Canada (February - March 1996)

Museum of Contemporary Art, Sydney, Australia (May - June 1996)

Helmond Museum, the Netherlands (September - October 1996)

ZKM Medienmuseum, Karlsruhe (Permanent exhibition since 1997)

Centre culturel canadien, Paris (January - March 1998)

Avatar, Amsterdam (April - June 1998)

Friches de la Belle-de-Mai, Marseille (August - September 1998)

Musée canadien de la photographie, Ottawa (May - October 1999)

Bonner Kunstverein, Bonn (November 1999 - January 2000)

Société des arts technologiques, Montréal (October-December 2000)

Wood Street Gallery. Pittsburg (January-February 2002)

The CD-ROM adaptation of Portrait One as part of Artintact2 was launched in June 1995 at the Multimediale in Karlsruhe. It has been presented in more than forty venues since. The DVD adaptation of Portrait One as part of the Artintact Series was published in February 2002.

The on-line WEB adaptation of Portrait One was launched in March 2001 at the Daniel Langlois Foundation for Art Science and Technology [<http://www.fondation-langlois.org/portrait1.html>]

Owners of the work:

There are four copies of the original installation version:

Copy no. 1: collection of the National Gallery of Canada (Ottawa);

Copy no. 2: collection of the ZKM/Medienmuseum (Karlsruhe);

Copy no. 3: collection of Joëlle Metzger/VidéoChroniques (Marseilles).

Copy no. 4: collection of the artist.



Portrait de famille / Family Portrait

(1993)

Interactive video installation for 4 networked computers with touchpads, 4 laserdisc players, 4 video projectors and four amplified speakers. Created in collaboration with the Institut Méditerranéen de Recherche et de Création, with support from the Canada Council for the Arts and the Conseil des arts et des lettres du Québec. Original version in French; the English version is subtitled.

Conversation with a Virtual Being: Imagine a portrait. You walk up to it and engage in conversation. You pick a question from a pre-established set on the screen. The portrait gives you an answer. A new set of questions, or comments appears. You get further reactions. As this process goes on, a conversation develops according to your curiosity and the subject's mood. The encounter may be cut short due to a lack of sympathy on either part, or it may develop into discussion of ideas, values or personal experience. The interaction is structured into levels of intimacy; you have to get to know and trust one another before getting on to highly personal matters. In the end, you may have made a new virtual acquaintance... or friend.

The technique developed experiments with portraiture. Following the painted and photographic portrait, the hypermedia portrait demonstrates the same interests for human beings, this time capturing and rendering not only physical likeness but also fragments of behavior. These virtual beings do not appear in the flesh (they are video reflections); and the questions are not verbal (they are chosen from a computer screen). Yet the interactive video installation works as a metaphor for an encounter. As with other virtual reality systems, these portraits are worlds onto themselves (that of the portrayed subjects), in which visitors are invited to play a role (that of a conversational partner). There are some risks (you may not like the reaction you get). But there are also rewards (getting to know the subject, and possibly, in the process, discovering something about what it is to be human).

Encounter with a Virtual Society: Imagine a series of hypermedia portraits that make a society of virtual beings. They all exist as individuals, lending themselves to personal encounters as previously described. But they are also "aware" of one another and may react to what is happening. They may want to speak their own truth about what is being said on them, or simply add to an interesting conversation without being asked. Or they may discuss things among themselves, chat about the weather or argue about a favorite controversy. Who these virtual beings are, and what they have in common is to be discovered by visitors. Visitors, by their perspicacity or mishandling, may trigger a family drama that could turn a quiet portrait gallery into a wild video theater.

A society of virtual beings is made of networked individual systems. As new virtual beings are added, each capable of hosting one active visitor, the installation grows from a single user to a multiple user system. A better balance is thus achieved between the society of virtual beings and the society of visitors. One possible outcome may be a forced interaction between visitors, as a response to the interaction among virtual beings.

An Interactive Portrait Gallery : Enter a portrait gallery. Norbert is a mathematician and dancer; he is also a friend of Sébastien an ethnologist interested in majorettes and rugby teams. Alain is Simone's son and the former biology professor of Laurence, who specializes in archeo-botany and is looking for work. Thierry and Laurence are close friends, having shared an apartment in the past. Thierry is a writer and works in a library; this is where he met Marianne, a graduate student in economics. It is through Thierry that Marianne and Laurence met Sébastien, and through Laurence that Marianne and Sébastien met Alain, who also owns a sheep farm in the Alps that is regularly visited by most of these people. Blanche, the author's daughter, first met Norbert in Montreal when he came to participate in a dance festival and stayed in their home. She later got to meet everyone else in Marseille when the author's family spent the summer there in 1992. This edition of the Family Portrait is about these people; it documents their life and tells about the process in which the work evolved. The group portrait was recorded in Marseille that summer.

Credit titles:

Original idea, interviews, photography, programming, design, direction, production: Luc Courchesne

Additional programming: Henry See

Cast: Norbert Corsino, Simone Archiloque, Alain Archiloque, Blanche Baillargeon, Thierry Discepolo, Marianne Rubinstein, Laurence Foucault, Sébastien Darbon.

Video editing: Michel Giroux

Construction of installation: Luc Courchesne, Guy Hébert, Claude Belils

Mastering of laserdiscs: 3-M Optical Recording (Menomonie WI)

Created in collaboration with the Institut Méditerranéen de Recherche et de Création (Marseille), with support from the Canada Council for the Arts and the Conseil des arts et des lettres du Québec.

Exhibitions:

Institut Méditerranéen de Recherche et de Création, Centre de la Vieille Charité, Marseilles (July 1993)

Machine Culture, Siggraph '93, Anaheim, California (August 1993)

National Gallery of Canada, Ottawa (November 1993 - January 1994)

Museum of Modern Art, New York (June - August 1994)

The Power Plant, Toronto (April - June 1995)

'95 Kwangju Biennale, Korea (September - October 1995)

Tokyo Metropolitan Museum of Photography, Tokyo (June - August 1998)

Owner of the work:

Collection of the artist



Salon des ombres / Hall of Shadows

(1996)

Interactive video theater for 4 networked computers with touch pads, 4 video projectors and 4 laserdisc players. Created in collaboration with the ZKM/Karlsruhe and the Musée d'art contemporain de Montréal, with support from the Canada Council for the Arts and the Conseil des arts et des lettres du Québec. Original version in French; the English version is voiced over.

General description:

Curious friends gathered in a gallery space are being visited. As conversation develops between the two groups, some form of complicity may be established that will place visitors in front of a difficult choice: should they assist in their escape or not. In the process, several questions are brought: What is the foundation of humanity? What sort of politics is likely to dominate in the future? What is the true nature of man/woman relationship? How does light affects behavior and the power to imagine? Overall, the installation questions the meaning and value of human life in cyberculture.

The four virtual characters forming the group have been constructed from the video recording of live actors in a studio. To communicate with them, visitors use touch pads: questions are picked from imposed sets appearing on the virtual computer screen which superimposes on the reflected video image of each character. Visitors' input from each of the 4 stations (virtual characters) will trigger either local events (one-to-one conversations) or general events (group interaction) depending on the context. Visitor's interaction thus goes from individual to collective, and from relatively unwanted at first, to essential as the dramatic potential of the work builds up.

The content of the work is structured into four levels of interaction and develops as follows: At first, the four virtual characters chat amongst themselves as if they were waiting for something to happen (level 1 -- performance mode). Incoming visitors can simply observe the scene or they may try to individually introduce themselves and make friend with some of them; at this stage each character can be interacted with separately (level 2 -- individual interaction mode). In the course of a one to one encounter, an inspired conversation may launch a general debate where virtual characters will argue with one visitor over the issue that was raised (level 3 -- discrete collective interaction mode). In the process, the virtual characters' existential crisis is revealed: They have been trapped in there and want to escape. Visitors face the choice of helping them or of abandoning them to their fate (level 4 -- collective interaction mode). The key to their freedom is in the title of the work.

Technical description:

The installation requires four Apple Macintosh computers equipped with ADB, serial and Ethernet ports, four computer monitors, four touchpads, four Pioneer LD-V 8000 laserdisc player, four video projectors and four amplified speakers. The computers, monitors, touchpads, laserdisc players, video projectors and speakers are encased in, or attached to, four pedestals distributed in a circle to create an interior space for visitors. A reflective glass plate, placed at an angle above each computer monitor, creates a virtual screen image above the pedestal. Each pedestal is also used to position a large reflecting glass plate at 45° directly underneath a projection screen attached to the ceiling above each pedestal; a video projector, positioned facing upward between the pedestal and the large reflector, projects the virtual character's image onto the screen suspended from the ceiling. Visitors, looking outward in front of each pedestal (station), see a first virtual plane showing the text fields (set of questions) from the computer monitor and a second larger virtual plane featuring the virtual character. The characters have been recorded on a black background; once reflected on glass, the video image thus loses its edge and the characters appear as ghosts inhabiting the real gallery space.

The authoring/delivery software was developed in HyperCard and runs on MacOS 8.0 or more recent; a "chat" server, running in the background on one of the four computers, is used to distribute information through a local Ethernet network using the TCP/IP protocol. The NTSC video sequences totaling 30 minutes for each character are stored on four CAV laserdiscs.

At each of the four stations, visitors use a touchpad to move the cursor about the computer screen and select questions from imposed lists. The questions are HyperCard buttons sending commands to the laserdisc player via the computer's serial port. Video sequences from the laserdisc are projected to the ceiling and reflected on glass to create a ghost image of the character at eyelevel. The four stations are

networked and each of its computers constantly "informs" the three others of events triggered by visitors. Some events are local, meaning that a visitor's interaction will only affect the character (station) he or she is engaged with while allowing other separate interactive processes to take place concurrently; some other events use the network to involve two, three or all of the stations (characters) in a particular event or set of events; in such cases, visitors are witnessing synchronized action (behavior) between the characters and are confronted to the challenge of having to deal with it and to collaborate in order to influence the situation. This system allows for the construction of an interactive/reactive theatrical experience ranging from performance (visitors witness interaction amongst virtual characters) to multiple individual interactions (visitor meets/deals with a single character) and collective interaction (visitors try to influence the overall course of action). The four virtual beings in Hall of Shadows have been constructed from simultaneous video recordings (four camera) of live actors in a studio.

The installation requires a dark and quiet space of at least 8 m x 8 m (floor) x 3.5 m (ceiling).

Credit titles:

Original idea, design, scenario, direction, production: Luc Courchesne

Acting (original French version): Marc Béland, Markita Boies, Paule Ducharme, Claude Lemieux, Alexis Martin

Photography and technical direction: Jason Levy

Camera: François Belhumeur, Roxanne Ouelette

Editing: Luc Courchesne, Michel Pétrin

Programming: Marc Lavallée, Luc Courchesne, Sylvain Parent

Fabrication of installation: Luc Courchesne, François Belhumeur, Guy Hébert, Claude Bélils, Andre Jetté, Jean-Claude Desjardins

Interface: Denis Labelle

Illustration: Tamas Waliczky, Karim Duranceau, Jean-Claude Desjardins

Voices (English speaking version): Liz Mac Rae, Michael Rudder, Marc Camacho, Arthur Holden

Sound engineer (English version): Martin Hurtubise

Direction (English version): Hubert Fielden

Many thanks to Pascal Courchesne, Michèle David, André Mercier, Monique Savoie, Jeffrey Shaw

Produced in collaboration with the Musée d'art contemporain de Montréal, with support from the Canada Council, The Conseil des arts et des lettres du Québec and the ZKM / Karlsruhe.

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Exhibitions:

Created in Montréal and Karlsruhe, 1993-96. Premiere of original French speaking version: Musée d'art contemporain de Montréal, January 1996. Premiere of English speaking version: Art Gallery of New South Wales (Sydney), May 1996.

Musée d'art contemporain de Montréal (January - March. 1996)

The Art Gallery of New South Wales, Sydney, Australia (May - June 1996)

Ars Electronica Festival, Linz (September 1996)

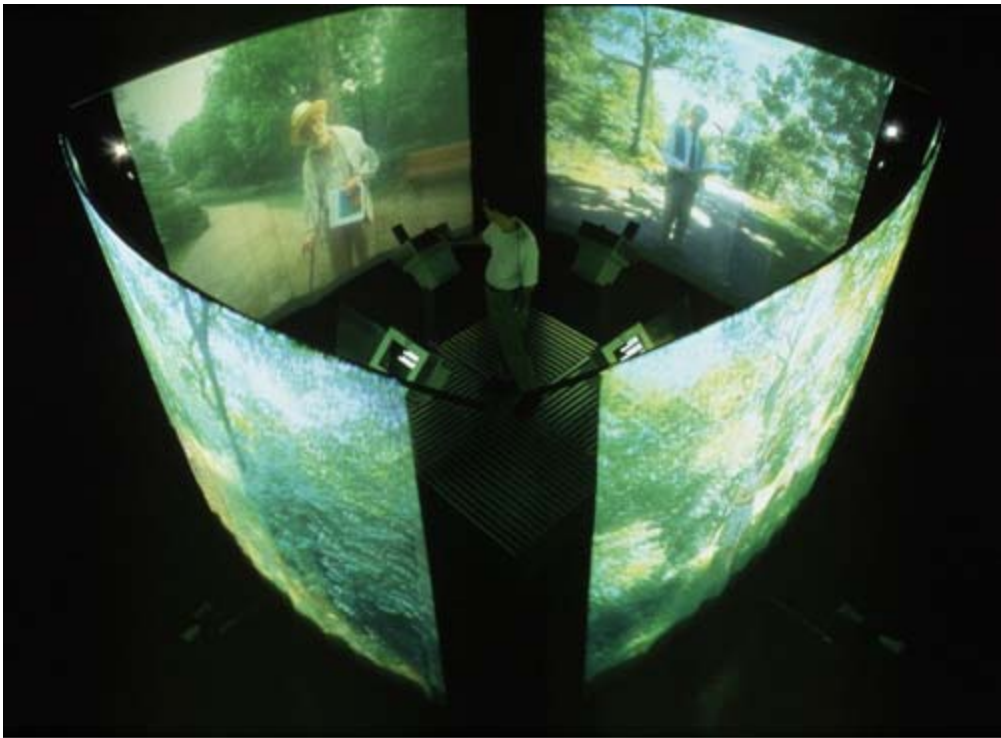
DEAF 96, Rotterdam, the Netherlands (September 1996)

Opening exhibition, ZKM/Institute for Image Media, Karlsruhe (October - Nov. 1997)

Festival Exit, Créteil and Maubeuges, France (March - May 1998)

Owner of the work:

Collection of the artist



Paysage no. 1 / Landscape One

(1997)

Interactive video panorama using 4 networked computers with touchpads and microphones, 4 laserdisc players, 4 video projectors and four amplified speakers. Created with support from the NTT InterCommunication Centre, Tokyo. Original version in French; the Japanese, English, German and Finnish versions are subtitled.

Four walls of a space are "painted", with video projectors, into a single photo realistic 360° landscape representing a public garden. The space, set in Montreal's Mont-Royal Park, is being visited by real and virtual characters. If the virtual characters appear free to come and go in the garden, real visitors will need help to walk in and explore. For this they have to make contact with one of the virtual character by selecting, using voice or touch, questions or comments from imposed sets. Questions on, for example, where they are, what is around, where one can go from here will engage a conversation leading to some form of relationship. The exchange may be cut short with everyone going back to their business or it may reach a point where visitors will convince a character to lead them somewhere. In such case, visitors are being pulled through the landscape after their virtual guide and the whole room appears to be moving in this direction.

The dialogue between the guide and the visitor or group goes on and defines the progression through space. Because real visitors are using virtual characters to steer their way through space, the nature of visitor's relationship to the character will define the space - physical or metaphorical - that can be accessed. There are several possible destinations or outcome. Visitors could simply be abandoned somewhere on the way if the connection to the character is broken, or they could be reaching a destination: a lookout or a forbidden boundary.

This journey through space is also a journey through words, meanings, language, subjectivity. It highlights not only the physical world in which this is happening but also its diverse meanings and functions to different people. The experience is about communication/discommunication between people with movements through space as manifestation of its nature; successful forms of communication will offer visitors more varied inroads into more remote places.

Credit titles:

Original idea, scenario, dialogues, design, direction, production: Luc Courchesne

Assistance to direction and production: Etienne Desautels and Marc Lavallée

Cast: Piali Courchesne-Laurier (child), Annick Lemay (mother), Hugo Dubé (father), Rolland Laroche (grand-father), Paule Ducharme (friend), Stéphane Demers (lover), Rodrigue Proteau (passer-by), Robin McKenna and Joseph Khaiata (drunken couple), Katou (dog)

Casting and actor's direction: Lorne Brass

Photography: Luc Courchesne, Jason Levy

Camera: Jason Levy, Pascal Courchesne

Sound engineer: Craig Lapp

Set photography: Frédéric Cloutier

Video production direction: Suzanne Gosselin

Assistance to video production: Dominique Carmichael, Étienne Desautels, François Vaillancourt

Computer animation: Jon McCormack

Video editing: Luc Courchesne, Michel Giroux

Sound track: Claude Schryer, Luc Courchesne

Sound editing: Martin Hurtubise

Post-production studio: PRIM

Programming: Marc Lavallée, Luc Courchesne, Étienne Desautels

English translation: Luc Courchesne

Japanese translation: Taki Kanaya

Construction of installation: Luc Courchesne, Guy Hébert, Claude Belils

Mastering of laserdiscs : 3-M Optical Recording (Menomonie WI)

Thanks to Germain Courchesne, Yoko Kojima, Mario Laliberté, Monique Savoie, Bureau du cinéma (Ville de Montréal), Université de Montréal.

Created with support from NTT InterCommunication Center, Tokyo

Exhibitions:

NTT InterCommunication Centre, Tokyo (October - December 1997)

NTT InterCommunication Centre, Tokyo (April 1997 - June 2000)

Cinémathèque québécoise (October - December 1998)

Cité des Sciences et de l'Industrie, La Villette, Paris (March - April 1999)

Kiasma, Helsinki (May-June 1999)

Museum of Communication, Bern (August-September 1999)

OK Center, Linz (September 1999)

Siemens Forum, Munich (October 1999 - January 2000)

Siemens Forum, Berlin (January - March 2000)

Siemens Forum, Erlangen (April - June 2000)

Wood Street Gallery, Pittsburg (February - March 2001)



Passages

(1998)

Interactive video installation for 2 networked computers with touch pads, 2 video projectors and 2 laserdisc players. Created in collaboration with the Museum of New Zealand, with support from the Canada Council for the Arts and the Conseil des arts et des lettres du Québec and the Canadian Department of Foreign Affairs. Original version in English.

Four new-zealanders, appear two by two to discuss, amongst themselves and with visitors, issues facing people and society in this part of the world in the late nineties. As their connection to the land is revealed, they offer to guide visitors in and around Wellington to places meaningful to them.

Laurae Perry, an Australia born actress, has been living in New Zealand for over 20 years. Geoff Park is an environmentalist who's ancestors from the Lake region in the UK make him a pakeha. Michael Tuffery is a performance artist of samoan origin. Meagan Tamati is Maori; she is also curator at the Museum of New Zealand. They all lived in Wellington at the time of the recording.

Credit titles:

Original idea, scenario, dialogues, design, direction, production: Luc Courchesne

Assistance to direction and production: Étienne Desautels et Marc Lavallée

Programming: Marc Lavallée, Luc Courchesne

Video editing: Luc Courchesne, Étienne Desautels

Construction of installation: Luc Courchesne, Guy Hébert, Claude Belils

Mastering of laserdiscs: 3-M Optical Recording (Menomonie WI)

Created in collaboration with the Museum of New Zealand, with support from the Canada Council for the Arts and the Conseil des arts et des lettres du Québec and the Canadian Department of Foreign Affairs.

Exhibition:

Museum of New Zealand, Wellington (February 1998 - March 1999)

Owner of the work:

Collection of the artist



The Visitor: Living by Number

(2001)

Interactive video panorama for computer with microphone and hemispheric projection system (Panoscope 360). Created with support from the Daniel Langlois Foundation for Art, Science and Technology, the International Academy for Media Arts and Sciences, the Canada Council for the Arts, Université de Montréal and the Société des arts technologiques (SAT). The original version is in English.

General description:

The Visitor: Living by Number is inspired by Pier-Paolo Passolini's 1969 film *Theorema* and by a dream Courchesne's daughter had when she was 10 years old. In the installation, visitors are planted somewhere in the Japanese countryside. From there they will try to make a life for themselves by saying any number between one and twelve to indicate the direction they want to go or to show interest in people and what they have to say. Exploring the territory, happening upon and entering a shelter, meeting and dealing with the inhabitants and gaining status within the group will define a visitor's

experience. Leaving the place and the inhabitants to themselves (as in Passolini's film) or being forced to escape after an earthquake (as in his daughter's dream) will further characterize the visitor's experience.

The experience starts in daytime, in the middle of rice fields just north of Ogaki-City in central Japan (Gifu Prefecture). In the inner garden of a low building, visitors will happen upon a woman preparing tea. This first encounter may lead to an invitation to diner where a mixed group of people (6) prepare and share a Japanese style stew (nabet). The diner is endless but conversations with dining partners may bring a visitor to spare moments in the intimacy of one's room where he or she is offered the host's mind and thoughts on different topics growing increasingly personal. In the process, a visitor builds a position in the group that either will have him invited to take more place among the group, or gradually ignored and abandoned.

Meanwhile, night has come and the risk of an unforgiving event in this earthquake prone area is more tangible. If such a thing was to happen, destroying the shelter and forcing everyone out, visitors would, depending on their status, be left behind or invited to join in the chaotic and confuse quest for a new place where every aspect of this group's life will resume in the same way as if nothing had happened.

Technical specification and diagram of the installation:

This single channel panoramic installation requires a Macintosh G-4 computer (867 mhz with 128 MB of RAM and an internal hard disc of at least 40 GB), a microphone, a SXGA data projector with a short throw lens and a panoramic projection device (Panoscope 360), or a SXGA projector with hemispheric lens and a projection dome.

The video images were recorded using a panoramic lens (RemoteReality) adapted to a high definition video camera (Sony HDW-700). The resulting video frames have the form of an anamorphic disc representing a large portion of the surrounding space from 15° above the horizon, to 80° under and on 360° all around. Once projected inside a dome (Panoscope 360 -- Second Edition), or reflected onto a hemispheric mirror (Panoscope 360 -- First edition), the original properties of each image are restored. The process for single channel panoramic imaging was developed by the author specifically for this work. It marks an important development in the research for simpler and more affordable immersive imaging techniques.

Frames from the original videotapes were digitized, cropped to 1280 x 1024 and assembled into compressed QuickTime movies using the TrueMotion 2X codec. The resulting high definition video sequences play at 15 fps from a standard Macintosh G4 internal drive or external FireWire drive. In the Visitor: Living by Number, the 1 hour and 35 minutes of high definition video uses 27 GB of disc space.

The authoring/delivery software was developed in HyperCard where sequences are defined, as well as the action points and the vocabulary for the voice recognition software. The voice recognition uses the standard PlainTalk resources from Apple's operating system MacOS 9.2.

A vocabulary of 12 words (numbers from one to twelve) is used by visitors to operate within this pre-determined world. These numbers are placed as a clock at the bottom edge of the dome in which visitors

are standing. Visitors speak the number corresponding to a destination or to point at a person they wish to engage with. In the course of a conversation, they will use numbers in the same way to signify interest or disinterest in what is said or offered: the number corresponding to the character's position will encourage the conversation to develop in the same direction; another number will either produce a change in the course of the conversation, set a different mood, invite the character to accompany the visitor somewhere else or simply put an end to the encounter. The signification of each number is contextual but the principle of numbers as pointers remains consistent throughout the work. Voice recognition only works when the action stops.

The installation requires a dark and quiet space of at least 8 m x 8 m (floor) x 3.5 m (ceiling).

Credit titles:

Cast: YOKOYAMA-sense (man 1), YAMAMOTO Shiro (man 2), Wayne MACEDO (man 3), Philippe CHATELAIN (man 4), MIWA Ikuko (woman 1), MYOKAM Hiroko (woman 2), Virginie LAVEY (woman 3), MIWA Momoco (woman 4)

Production team:

Screenplay: Luc COURCHESNE, Blanche BAILLARGEON

Director/producer: Luc COURCHESNE

Production designer: MYOKAM Hiroko

Director of photography: Franco ZOCCALI

Sound engineer: FUYAMA Tsuyoshi

Coordination in Japan: MYOKAM Hiroko

Systems for camera movements: Luc COURCHESNE, Franco ZOCCALI, Robert McNABB, André JETTÉ

Systems architecture and design: Marc LAVALLÉE, Etienne DESAUTELS.

Programming of authoring software: Etienne DESAUTELS

Authoring: Luc COURCHESNE

Image capture: Covitec

Video Editing: Luc COURCHESNE, Olivier LETARTE, Marc LAVALLÉE

Sync sound design: Olivier LETARTE

Ambiant sound design: Zack SETTEL

Design of installation: Luc COURCHESNE

Assistant: Marijulie LAVIGNE

Special thanks to Blanche BAILLARGEON, D'nardo COLUCCI, Jean GAGNON, Franklyn JOYCE, Victoria LYNN, SAKANE Itsuo, Monique SAVOIE, TAKAHASHI Yoko, Ron RIZVI, Sergei TRUBKO, Heath WATTS, Oka-san.

Created with support from the Daniel Langlois Foundation for Art, Science and Technology, the International Academy for Media Arts and Sciences, the Canada Council for the Arts, Université de Montréal and the Société des arts technologiques (SAT).

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Exhibitions:

Created in Montréal and Ogaki-City (Japan), 1999-2001. Premiered in Space Odysseys, a group exhibition at the Art Gallery of New South Wales (Sydney), August 19, 2001.

Art Gallery of New South Wales, Sydney (August-October 2001)

The Interaction '01, Ogaki City, Japon (October-November 2001)

Société des arts technologiques, Montréal (January 2002)

Transmediale, Berlin (February 2002)

Cinemia, Melbourne (March-May 2002)

Festival Via, Maubeuge (March 2002)

Festival Exit, Créteil (April 2002)

ZKM/Karlsruhe, (September 2002-February 2003)

Owner of the work:

Collection of the artist

Complete list of interactive installation work by Luc Courchesne

Un an au Carré St-Louis (1980)

The Center is Dark (1982)

Lightproof Suit (1982)

Day and Night at the Beach (1983)

Bostonian Suite (1983)

Dôme clair-obscur (1984)

Elastic Movies (1984)**

Installation clair-obscur (1986)

Encyclopédie clair-obscur / Encyclopedia Chiaroscuro (1987)

Dédale et Icare, dans l' Homme-Oiseau (1989)*

Portrait no. 1 / Portrait One (1990)

Portrait de Claude Jutra (1991)

Personnages historiques, Musée Pointe-à-Callières (1992)*

Portrait de famille / Family Portrait (1993)

Portrait of Paula Dawson (1994)

Salon des ombres / Hall of Shadows (1996)

Paysage no. 1 / Landscape One (1997)

Passages (1998)

Jeu de chaises (1998)

Rendez-vous... sur les bancs publics (1999)***

Collection de portraits du Musée de la communication, Berne (1999)*

12 portraits, dans le contexte de Québec-France : images et mirages*

Panoscope 360° (2000)

Space by Number (2000)

Panoscopic Journal (2000-2001)

The Visitor: Living by Number (2001)

* Commissioned work

** Collaboration : Created at MIT's Film/Video section by Benjamin Bergery, Luc Courchesne, Ellen Sebring, Michael Roper, Bill Seaman, Peter Roose, Russ Sasnet, Rose Gershwin and Karin Hrechdakian.

*** Collaboration : Produced by Société des arts technologiques in collaboration with Monique Savoie, Atelier in Situ, Sylvain Parent and Simon Piette.

Note : For more information: [<http://www.din.umontreal.ca/courchesne>]

Notes on the author

Luc Courchesne was born in 1952 in St-Léonard d'Aston, Québec. He studied at the Nova Scotia College of Art and Design, Halifax (Bachelor of Design in Communication, 1974), and at the Massachusetts Institute of Technology, Cambridge (Master of Science in Visual Studies, 1984).

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 and others. He has since produced more than a dozen installations including Encyclopaedia Chiaroscuro (1987), Portrait One (1990), Family Portrait (1993), Hall of Shadows (1996), Landscape One (1997), Passages (1998), Rendez-vous (1999) and The Visitor: Living by Number (2001).

His work has been shown extensively in galleries and museums worldwide: Sydney's Art Gallery of New South Wales, New York's Museum of Modern Art, Tokyo's InterCommunication Center (ICC), Paris' La Villette, Karlsruhe's ZKM/Medienmuseum, Montréal's Musée d'art contemporain among others. His installations are part of the collections of the National Gallery of Canada (Ottawa), the ZKM/Medienmuseum (Karlsruhe), the NTT InterCommunication Center (Tokyo) and the Museum of Communication (Bern). Luc Courchesne was awarded the Grand Prix of the ICC Biennale '97 in Tokyo and an Award of Distinction at Pris Ars Electronica 1999 in Linz, Austria.

Based in Montréal, Luc Courchesne is professor of design at the Université de Montréal and president of the Société des arts technologiques. Marc Lavallée and Étienne Desautels have been his two main collaborators since 1996.