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## Intermedia Remediated & the Question of Designing Discourse

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### Abstract :

New "engines of discourse" (neural networks, algorithms and other forms of artificial intelligence, combined with the devices that record and interpret viewer actions) bring to the fore rhetorical concerns that challenge discipline-based notions of process and form. We shall focus here on the tradition of intermedial art practices to better understand the ever more complex question of how to inter-relate three aspects of digital communication: authorial "intent", the digital sign and its interactive exploration by a "spect-actor". We shall argue that the digital sign is an extension of intermedial thinking rooted in a pre-digital, photographic practice and esthetic. The writings of several French theorists on the subject of interactive digital design will provide a context for understanding examples of "virtual art-realities", whose specificity is staging relationships between objects and people.

### Keywords

Rhetoric; Discourse; Intermedia; Interactivity; Digital Sign; Esthetics; Artificial Intelligence; Behavior-based Art.

Today, neural networks, algorithms and other forms of artificial intelligence, combined with the devices that record and interpret behavior, strengthen pre-digital Intermedial practices and herald highly experimental dialogic forms. What of the concept of "discipline", then, in information design?

An interactive sign brings together functions traditionally kept separate. Not only does a hyper-lined sign (e.g. ->, an arrow indicating "next") have symbolic value subject to interpretation, it has use value, too, as a tool (Souchier, Jeanneret, 1999). It is a sign, a messenger, and a hinge, to be looked at and looked through, simultaneously. What was once considered as separate, i.e. "you don't have to know how to read in order to turn a page," is now conjoined. In a way, hyper-linked signs are where hardware and sign systems meet. Half visible, half-hidden, sandwiched between code and gesture, medium and genre, hyperlinked signs determine function, choice, and movement. They are by nature hybrid and intermedial (Braun, Gentes, 2005).

The digital sign, tip of the iceberg of information technologies, has thrust Intermedia upon designers, bringing into question the boundaries of their

discipline. Although information technologies have compelled designers to transpose concepts and methods from the Fine Arts in an effort to find alternative ways of constructing digital space and interactive narrative, we shall argue here that the challenge to established ways of thinking requires far more than simply turning to other disciplines for inspiration. The digital sign is an extension of Intermedial thinking rooted in a pre-digital, photographic practice and aesthetic, that began to threaten established disciplines over a hundred years ago. Intermedia has also set the stage for today's information technologies.

An introduction to intermedial art practices will provide a first context for understanding the dismantling and re-mantling of disciplines at the heart of information design today. The subject is complex, not unlike traveling through a hall of mirrors reflecting reflections. First of all, to quote Richard Coyne, "Metaphors, problems and technologies are interrelated. Metaphors set problems that technologies are commonly put forward to address. These technologies in turn promote metaphors that set the problems. Technologies also provide metaphors of each other..." (1995, p 286). When considering Intermedia as a whole,— as an emerging discipline in and of itself and not just as a concept,— one adds to this inter-relatedness a predilection for breaking down most categories, especially those linked to given "disciplines". Our hope is that Intermedia will provide a lever for dealing with the concept of "discipline" in broad terms, on a scale suited to information technology.

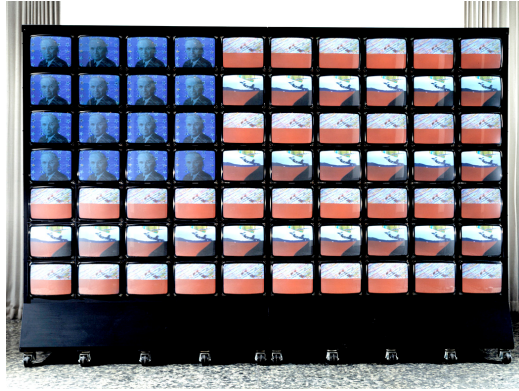
### ***Pre-digital Intermedia practice***

The term "intermedia" was first used in the mid-sixties by Fluxus artist Dick Higgins to characterize the work of Philip Corner and John Cage, "intermedium between music and philosophy", or the constructed poems of Emmett Williams and Robert Filliou "intermedium between poetry and sculpture", among others (Higgins, 1969, p29), whose work brought a priori unrelated notions of gesture, gaze, and process to bear on each other. It is an interesting alternative to the word multimedia, implying more than the mixing of materials to a single end. Fluxus art is interstitial, each artist forging the specificity of his work from borrowed and re-combined aspects of different media. An Intermedial is a hybrid, synthetic, conceptual whole, making it « impossible to separate out the different media in an integral way." (Higgins, quoted in Zurbrugg, p201).

Intermedia requires a vantage point once removed from material processes. This distance is found in the Fluxus "score," a set of instructions for the making of a work of art. These instructions are often abstract, allowing for the blending of real, imaginary, and symbolic registers. For example, in *Tablet 3* from *Gloss for an Unknown Language*, 1958, the sculptor George Brecht proposes an "image formed by a moving object for the duration of one breath." (Antin, Rothenberg, 1965, par3). What sort of object? Moving in what direction? And according to whose breath? The score leaves those specifications to the convictions of the person willing to transform the score into a given work of art.

"The real innovation lies in the emphasis on the creation of a system," (Higgins, 1969, p48), a cross between an idea, an operating principle and a

set of constraints. Predicated on the existence of an "intent" independent of any material incarnation, Higgins' score for *Stacked Deck*, "in which any event can take place at any time, as long as its cue appears" (1966), is a case in point. In its most extreme manifestations, Fluxian Intermediality dispenses with media altogether.



Nam June Paik, *Video Flag*, (1985-1996)  
70 video monitors, 4 laser disc players,  
computer, timers, electrical devices, wood  
and metal housing on rubber wheels  
Photo courtesy of the Smithsonian  
Institution



Dick Higgins, *Danger Music No. 2*.  
Performance at Fluxus Internationale  
Festspiele Neuer Musik, Wiesbaden  
(1962).  
Photo : Hatmut Rekort.

By disjoining the physical link between author, gesture, object, use, and medium, Fluxus weaves an unprecedented heteroglossia that conjoins artists, spectators, gallery owners, investors, critics, the publishing industry and every other facet of the world conditioning the identity and life of the work. Often referred to as a "dynamic," the Intermedial method is discursive. Form emerges from exchange, implying a fundamental shift in scale. The work is not an object, nor even reducible to an author's individual's disembodied "intent". The scale of Intermedia is that of a network (Saper, 2001, XV).

### ***Re-mediating Intermedia***

Fluxus' broadening of art to include social context rejoins today's pragmatic emphasis on legitimization and social context in design practice. It is participative and non-hierarchical. It also places art production "within the larger, social flow" (Higgins, 1964), with a slight twist, limited to the distance (Higgins' "cue") taken to see things anew.

Fluxus' pre-digital, intermedial play with "systems" anticipates the design issues associated with today's information technology (Paul, 2003). Coded intent provides both the means and the structure for organizing content that can be retrieved and combined from any number of sources, mixed and re-mixed randomly. Moreover, Fluxus' dismantling of established media use pre-figures the reversal in the production and reception of information characteristic of interactivity in digital media (Popper, 1993). The author anticipates, his public actualizes, and code is the mechanism that gives

shape to this joining of projections and gestures, “open” to each other. In this sense, code resembles the Fluxus “score,” also incomplete until performed and acknowledged by the spectator, become “spect-actor” (Weissberg, 1999).

It is tempting, at this point, to consider Intermedia as a practice verging on a discipline unto itself, one which finally found its medium through code. If so, the price paid by this re-mediation (Bolter, Grusin, 2001) is very high. However much Intermedia seems suited to the design of information technology, it is, at heart, anti-technological. The best way to apprehend this inherent paradox is through the analysis of specific examples. Again, we shall turn a work that comes from the Fine Arts. The point here is to single out what is most relevant to the design of information technology, whatever the apparent discipline. Created in the Atelier at the Cube, France, *At a Distance*, by Damaris Risch, includes elements of AI technology and high-end programming by Didier Bouchon, an ex-game designer. At issue here, how to orchestrate inter-related aspects of digitally-based communication: authorial “intent”, a fluctuating digital sign and its interactive relationship to a “spect-actor” in a given situation.

### ***Coding Relationships***

*At A Distance*, by Damaris Risch, consists of several hundred self-portraits projected successively onto a large screen. The portraits fade in and out from one expression to another depending on several criteria: the time of day, the presence or absence of a viewers, ambient sounds...and the “mood” of the work of art itself. Risch’s face has a tendency to smile when someone comes near. It looks slightly hurt if the viewer then turns away. Occasionally she seems to pout; if the viewer moves about a bit, she will smile once again. At night she sleeps, though she’ll wake up if a noisy scooter passes by.

*At A Distance* builds a “relationship” between viewer and work. Risch transforms the work into a fetish of sorts, a magical “self/other”. Inversely, the work imposes the terms of a relationship, inciting the viewer to “behave” in one way or another in order to get a specific response. “Act nice, and maybe I’ll be nice.” The inter-relatedness installed by *At A Distance* can be powerful. One morning during the Festival Premier Contact, organized by the CUBE, when Risch stopped by to check how well the installation was running, she found traces of lipstick on the glass casing. A woman had come to kiss the image in the middle of the night.



Damaris Risch, "At A Distance", by 2005, produced by the Atelier du CUBE, Arc de Seine, in partnership with the software company, Virtools.

These self-portraits are "photographs" of a sort. They were taken with a digital camera. A digital photograph floats behind a screen, independently of chemistry, paper, surface, and grain; it is not the product of a single "click of the shutter" and the transfer of light onto chemically treated film. Difficult to distinguish materially from any other digital image, a digital photograph has been gutted of its material and procedural specificity.. For one, the temporality associated with a photograph,—that of the "instant",—is no longer verifiable. The type of experience transmitted – that of "testimony", grounded in the indexical sign (Krauss, 1977) — is no longer intrinsic, either. For example, the eyes in *At A Distance* have been copied and cut-out to form an invisible mask so as to better control the nature of the transitions from one image to another.

Intermediality in digital design is both strengthened and weakened by the homogenizing nature of the digital medium itself. Here, the photographs are "rendered" so as constitute an inter-medium between 3D and cinema. It works. The problem is that the intermediality is anecdotal. It reveals nothing intrinsic to the experience of the art of photography. It is a "special effect" smoothed out in a savvy compositing of pixels. It is as if the medium of photography had become a mere genre of digital imagery, whose essential *raison d'être* lay elsewhere.

The pixels blend so as to evoke not an "instant" but a single presence evolving in time. *At A Distance* is a fully constituted rhetorical system that we apprehend straight away as an autonomous and coherent entity. The work is a "whole" and relates to us as a whole, relating to us in a given context. We are faced with an "other" that situates itself on our "level", as a full-fledged interlocutor. The specificity traditionally attributed to authorial intent is situated somewhere between the object and the spect-actor. Form has become a kind of relationship.

## The engines of discourse

This digital intrusion on the photographic process also allows for the image to be coded in such a way as to anticipate our presence. Hidden

instruments are at work here. They measure our movements, attitude and the surrounding space, providing much the same kind of bridge as between sign systems and hardware. Intent has been re-distributed over a collection of disparate tools that are often referred to as "engines". Once triangulated, these engines help install the illusion of a coherent and convincing relationship with the viewer. A close look at how these engines work is necessary in order to appraise how much of the discipline of photography has survived its transposition to the world of information design.

### ***The art engine***

This engine determines the appearance of the work and provides the palette for a coherent system of expression. Often the starting point for artists new to the field, it helps convey the author's attachment to a given discipline. This includes specifying the kinds of metaphors used to evoke "medium", construct "shapes", and emphasize "process".

These formal concerns need to be structured so as to respond to the outside world dynamically. Some idea of "why" and "how" the work should or shouldn't evolve in one direction or another is essential. Technically, this involves breaking down the work into discrete elements and figuring out how to hinge them back together. For *At A Distance*, this meant choosing to "fade in" and "fade out" instead of morphing from one expression to the next. The problem was getting from one image to another without winding up with four eyes on the screen at different heights. The artist chose to keep the eyes lined up at all times. The steady gaze provided continuity in the psychological link established with the viewer. Only her shoulders shifted up or down.

The richness of the formal world thus constructed also entails defining and playing with several variables. For Risch, this meant selecting the characters' expressions, deciding how long a given expression should last, or how long the transition between photographs should last, thereby fine-tuning the symbolic elements that not only "move", but also "move" the viewer.

### ***The behavior engine***

This engine concerns the internal rules determined by the author so that his work seems to take "initiatives" on its own. First, the engine has to make clear to the viewer that he has been taken into consideration. This is the first step in a kind of "contract" concerning the type of communication between the work and the public, setting rules and rhythms that can be played with over time.





Damaris Risch, Flow Chart for "At A Distance", 2005, co-produced by the Atelier du Cube, Arc de Seine.

Secondly, this engine determines how the work reveals itself, formal specifying a kind of "behavior". Every work is different in this way, reflecting, formally, what the author believes is most important in the relationship to be created with the public. How the work "behaves" allows it to establish a "presence" that is key to alterity.

*At a Distance's* behavior is determined by a neural network that regulates transitions between photographs. The photographs all have

themes: smile, asleep, anger, meditation, love, sadness, in love, etc. They are grouped into categories: positive emotions, negative emotions, night time, etc. Short scenarios line up photos from each category in order to "tell" a given story. An evolving balance of positive and negative numerical values determines the priority of one sequence over another, depending on a collection of internal or external parameters.

A third level comes into play here. It has to do with introducing slight incoherencies, unexpected variables, so as to reinforce a perception that the work has a degree of autonomy. After all, a relationship is not always predictable. At stake, building up a sense of "beingness."

### **The sensory engine**

The things "sensed" may be simple. If a web-cam detects someone nearby, one of the neural-network's "Hi" scenarios will be activated. Getting this basic information to have a symbolic impact depends on several factors. Judging, for example, that a face is looking straight at the screen for a given length of time, can mean several different things: a level of attentiveness, a level of inactivity or a level of boredom. The author has to be clear about the underlying assumptions that determine how signals are interpreted. A margin for error has to be factored in as well.

Secondly, the public needs to understand how his reactions have been anticipated. "Just as the term behavior has little meaning independently of the artistic principles behind the work, so the analysis of the public's behavior depends on what the author is trying to get the public to do" (Aziosmanoff, 2007, p 50). This involves working with different time-frames. "Ah, she's spotted me, and is smiling." This is not just about getting the viewer's attention, but about getting the viewer to realize, before her attention wavers, that her presence is a formal factor being taken into consideration by the work.



Once this has been established, it is important for the work to begin to impose the terms of reciprocity in a more subtle manner. The sensors need to be programmed to take into consideration things that happen later on in time. Patterns need to be established that help the viewer "read" the larger scenario.

In sum, the captors need to be programmed to determine information that recoups the formal and behavioral parameters of the other engines.

## Filling in the blanks

The indexical properties of photography have been reversed. The image's "veracity" is no longer intrinsic but propped up by the perceived appropriateness of its response to a constellation of stimuli. The focus is on the viewer and how his presence is integrated within the work. The question is not only how a work "behaves", but how and why the work gets the viewer to behave and move in a way that, in turn, gets the work to reveal itself further.

In absolute terms, an author can anticipate, the system can suggest, the viewer can project, but whether viewer and art-work hook up is a big gamble. "Indeterminacy" (Weissberg, Barboza, 2006) is at work, though it doesn't concern the moment characteristic of interactive scenarios, when suspense finds resolution via "choice". In the absence of museum walls, explanatory notes, special lighting, etc, the curatorial "cue" is on the register of small talk. "Hey there!..." needs to elicit a response, in a partially open-ended situation. The symbolic continuum between work and spectator, reinforced by a web of hidden technologies, is built over time. It is a function of repetition, recognition, response, all meaningful to the extent that the viewer's projected role as "interlocutor" coincides with the programmed scenario.

On the surface, we are not far from a "world transformed into discourse", to paraphrase Metz on the subject of cinema (1968, ed. Rosen, p40). One could argue that the very essence of a photographic esthetic thereby survives and persists. And yet, one couldn't be further from the Fluxian promise of emancipation from pre-set formalisms. Whether machine code, programming language or interactive icon, code is not first written in one medium, then performed, later, in clever symbolic re-combinations. Code "runs", filling the Fluxian gap between intent and gesture (Braun, Gentes, 2005). *At A Distance* weaves dialogic form out of an invisible mesh of electronic devices. Instead of laying bare the mechanisms of meaning that structure an object's appearance and place in the world at large, information technology reconstructs an opaque simulacra of these mechanisms.

## Discipline?

Intermedia re-mediated reveals much about how we view the relation between the terms "information" and "technology". Several paradoxes emerge.

The first paradox is that information technologies prolong an existing photographic esthetic. Cameras have described as a "prosthesis for the

eye" (person, date). The indexical and chemical nature of the photographic process has been likened to sight itself. Compared to a painting, built from accumulated and discrete gestures mediated by hand-held tools, the instantaneity of a photograph is indeed magical. Fluxus' emancipation from technique can be said to be photographic in this sense. Fluxus has simply dispensed with the camera, "taking shots" and constructing montages with slices of real life.

Information technology's fascination with seamlessness is an extension of the same esthetic. Just like the camera before it, the devices that accompany information technologies also strive for transparency. This esthetic is grounded in an illusion concerning the inherent neutrality of technology. Paradoxically, it transforms the design process into a two-tiered activity: one for engineering the tools used for representation, the other for defining meaning. This dichotomy encourages the view that "the physical presence of technology is subservient to what it contains or accomplishes." (Coyne, 1995, p28).

This double-bind linking information technologies to an esthetic that describes technology in neutral terms, yields another paradox. As can be seen in works such as *At a Distance*, information technology's "prostheses for the brain" create mirrors. The work is mostly about our fascination with our own responses to the work itself, and to this extent develops a variation on the esthetics of narcissism, an expression coined by art critic Rosalind Krauss on the subject of video (1976). However, in using prosthetic devices to re-enact the dynamic of human relations, information technologies lay bare the limitations of the photographic esthetic at their root. The "art" here is more often than not reduced to the art of testing the virtuosity of transparency. The loop is fundamentally solipsistic, however much an "art engine" attempts to reconstitute a discipline by metaphoric means (whether it be photography, painting or sculpture...).

In an article re-published on-line for Fluxus' 40th-year reunion in Paris in 2002, the artist and media theorist Ken Friedman complained of the general tendency for digital artists to focus on technical solutions rather than philosophical implications when using information technologies:

*"The computer-generated images presented today as computer art or the fractal images of chaos studies are simplistic presentations of an idea. They are laboratory exercises or displays of technical virtuosity, designed to test and demonstrate the media and the technology. They are the intellectual and artistic equivalent of the paint samples that interior designers use to plan out larger projects. They may be interesting and useful in some way, but only people shopping for paint find them relevant."*

Friedman complains of work that is both spectacular and shallow. "A failure of philosophy is the problem. Too many artists are entranced with the physical qualities of media and unconscious about ideas. Art is burdened by attention to physical media and plagued by a failure to consider the potential of Intermedia" (Friedman, 2002).

How then can Intermedia renew the failing esthetic from which it emerged in the last century and from which it has re-emerged today? This question is

at the heart of the question of “discipline” in an information age. To quote Coyne again, on the subject of what he calls the “hermeneutical view” in the context of a broader discussion of Heidegger: “If the essence of technology is to conceal Being’s true nature, the essence of information technology is a ‘last gasp’ by Being to reveal its situation in human affairs.” (1995, p 97)

What is a “discipline” when couched in these terms? Some “intermedial” answers come from Lakoff and Johnson, as summarized by Coyne (1995, p 286):

*“...categories of objects and actions do not exist merely in isolation but are formed into experiential gestalts — basic metaphor structures(...) There is a metaphor structure pertaining to containment...distinguishing an interior from an exterior...Other metaphor structures pertain to paths, links, forces, balance, the up-down orientation, the part-whole relationship and the center-periphery relationship.”*

This approach seeks to unearth and describe deep symbolic structures. It brings to mind Italo Calvino’s fascination with a kind of form that is not merely analogical, but choreographic. The inhabitants of one of Calvino’s Invisible Cities, named Ersilia, “stretch strings from the corners of the houses, ... according to whether they mark a relationship of blood, of trade, authority, agency. When the strings become so numerous that you can no longer pass among them, the inhabitants leave: the houses are dismantled; only the strings and their supports remain” (p92)

Here, a web of symbolic relations constitutes a kind of “score” for living out a particular “experiential gestalt.” If the larger, underlying philosophical question of how meaning is conserved through different systems of reference is beyond the scope of this paper, this relational approach to structure provides a clue to the terms and conditions for transposing the intelligence that art and design disciplines seek, by definition, to preserve.

## Conclusion

It is tempting to cite another example, perhaps more suited to the context of a conference on design. Entitled « Little Red Riding Hood », the work uses robots, called Aibos, programmed to act like the characters out of the fairy tale.

Aibos look like dogs. They not only wag their tail but they snuggle up, nod, perk their ears and generally seem to have a life of their own. Here, one is dressed in red (Little Red Riding Hood), one in orange (the big bad wolf) and one in green (the hunter). All three are programmed to respond to each other according to color-codes. The wolf walks about aggressively, on the prowl for little Red Riding Hood. When he spots her, he first tries to seduce her by strutting around. She responds with little enthusiasm. He is then more brutal, and she submits to him. When this happens, the hunter receives a signal and scouts about for Little Red Riding Hood. If he arrives “in time” to rescue her, the wolf leaves the premises. If not, the wolf will eventually ignore Little Red Riding Hood and go about his business, elsewhere. This allows for the tale to resume, once again.



Florent Aziosmanoff "Little Red Riding Hood", 2003, co-produced by the Atelier du CUBE, Arc de Seine, France, in partnership with Virtools.

Globally, the Aibos constitute a multi-agent environment, with each robot programmed to adapt itself to any individually experienced situation. Left on the sidewalk to act out their inter-active drama (or ignore each other if that's how things work out), they are very resilient – should they fall, they know how to get back up on their feet, for example. Aside from little colored vests, the robots look alike. This highlights the behavior that distinguishes each robot from the other.

Played out on a city street, *Little Red Riding Hood* manages to mix a rich variety of discursive levels. The piece is all about roles. The robots are not just animated objects, but performers as well. They remind us of the story by enacting it, over and over. The dogs elicit responses from the surrounding crowds, which they usually get. People pretend they are real. Kids crouch down and identify with *Little Red Riding Hood*, or scold the wolf for his antics. The spectators are swept up in the process. And, what's more, they become "real" to the work if they too "act out" a part.

The situation is uncanny. The spect-actor is not master of the viewing situation. But neither is the author. As for the work...it mostly projects back images of the spect-actor's own behavior. Indeed, the spect-actors have a choice: to relate to a robot of a dog, or a character from a Fairy Tale. Of course, a mixture of the two responses is also possible. What is interesting to note here is the way in which the stereotypes —wolf, maiden in distress, savior,— introduce, playfully, a psychological intrigue into the lives of people who participate. They play with the boundaries between the real and the artificial. If we kneel down to look at the cute metal robot dressed in yellow, we're also checking out the big bad wolf.

Are we a master or a maiden?

A viewer or a victim?

If we are dressed in red, the wolf will decide for us...

N.B. Other works available for demonstration : TOP ROW : "Ghosts", by Vincent Levy; "Body to Body" by Indira Cruz; "Move/Don't Move" by Carol-Ann Braun ; and a sound installation on video, "Roundabout Sound" by Roland Cahen.



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### **Florent Aziosmanoff**

In 1988 Florent Aziosmanoff co-founded ART3000, France's main non-profit organization dedicated to digital art. He has curated dozens of exhibitions on digital art, including at the Centre Georges Pompidou (1991) and the Palais de Tokyo (1992,1993). He launched the « Festival Premier Contact », focused on the question of digital art in an urban space (2002, 2005, 2008).

Over the past ten years, he has organized a series of international conferences entitled "Etats Généraux de l'Ecriture Interactive", landmark events dedicated to analyzing practical and theoretical issues related to digital art. He founded and managed the magazine "NOV'ART" (1988 to 1997). In 1993, he founded the "Atelier", dedicated to helping artists create experimental digital art-work incorporating real time systems, artificial intelligence and "natural" interaction.

He has been a guest speaker in French universities such as Paris8, la Sorbonne, and Supinfocom. He has also been invited to speak abroad, at MIT's Media Lab, Media Lab Europe, NYU's Tisch School of Art, and the Belgrade's International Art Management Program. He is an advisor for the European Community and the French Ministry of Culture.

Also an artist, Florent Aziosmanoff specializes in "behavioral fictions", that include stories in virtual spaces and experimental narratives with Sony's Aibos robots.

[www.lesiteducube.com](http://www.lesiteducube.com)

### **Carol-Ann Holzberger-Braun**

Painter and digital artist living in Paris, France.

In addition to many paintings, she has created several room-sized and screen-sized renditions of poetical texts. "Un Conte à Votre Façon", by Raymond Queneau, was published by Gallimard ("Machines à Ecrire",



1996). A series of installations in virtual reality, based on the work of Blake Leland, were shown in Paris, Tours and Montpellier (1994, 1995, 1997). Her most recent digital work, entitled "Move Don't Move" (2006), produced at the Atelier du CUBE, incorporates elements of artificial intelligence, and has been featured in shows in Paris, Belgrade, and Katowice.

She has taught interface design since 1994, in a wide variety of schools, including Telecom Paris-Tech; the Master's Program at the Laboratoire d'Imagerie Numérique, Angoulême; at Laval's Virtual Reality Center. Prototypes developed in this pedagogical context have been funded by the Ministère de la Culture, La Région Ile de France and the Fondation Louis Leprince Ringuet. At the core of this applied research, an interest in transforming dialogue into a search engine. The idea has come to its own in an open-source platform entitled "chatanoo" and several student-led community projects.

[www.inner-media.org](http://www.inner-media.org), [www.concert-urbain.org](http://www.concert-urbain.org), [www.tour-a-tour.org](http://www.tour-a-tour.org)