Burning the Interface
Mike Leggett
Master of Fine Arts
(Honours)
(MFA)
1999

Burning the Interface

Artists' Interactive Multimedia
1992–1998

Mike Leggett

Thesis for examination as Master of Fine Art (Honours)
1999

College of Fine Arts, University of New South Wales

Contents

Part One: Preface

Form and Content have characterised the central obsession of artists at work in the 20th Century. Certainly, if I was to describe my central aesthetic obsession and those of my closest working friends, associates and colleagues in three words, these would be the three words to use. Though not an aesthetic exclusive to this century, the workers on the modernist project who climbed aboard as the century began, alight, as it were, as we reach its end.

To describe the experience of applying this aesthetic to the process of making work, and thinking about making work, and thinking about how any work is presented to and received by others, presents its own problems. How to find a form that suits the expression.

A statement could use the narrative form and the first person singular and begin on the first day of life, or first day of school, or college, as a student, as a teacher, as an artist. Hacking into the substance of what seems important about the topic of interactive multimedia could also use the narrative form and construct that comforting umbilical tube that moves its nourishment - “starting at A, through K, to Z”.

But such a monocular viewpoint is not how the world is encountered and is certainly not adequate to describe my research into interactive multimedia and the way in which it has been used by artists as a medium of expression. There are too many complex relationships. The narrative descriptive form, the thesis, with an introduction, a middle and a conclusion for instance, has a tendency towards over simplifying the research process as well as the reception of an understanding of outcomes from the project. The very act of ordering these words is unrelated to the temporal sequence in which phases and details occurred. The choice of words and the whole technology of language as a reductive process is not the most appropriate for conveying the complexity of another iterative technology, especially one that in these early days of its definition and development, finding both material and poetic form.

The proposal initially was to deliver this thesis in hypertext form. Much of the research process had included the writing of journal and magazine articles - the act of linking one document with another in hypertext form would have mirrored for the reader the genesis and the detail of that process.

The crux of a hypertextual navigation method is that different routes are plotted through the same resource material accumulated during the process of the project. The thesis is both the subjective viewpoint and

the subjective object prepared from an objective perspective. It is also the resource material, the documents and artefacts that have been assembled, which remain open to other uses and interpretations. Meaning and meaning-making as an open and transparent construction.

Whilst libraries and archives have yet to establish methods, standards and protocols for accommodating electronic hypermedia, the thesis component of this research project is delivered, notwithstanding, in this book form of conventions, and while offering a kind of 'random access' cannot possess the dynamic elements of hypermedia and aspects of multimedia accessible using Web browsers and the Internet.

The convention that a thesis should present an argument, or develop an aspect of the discourse surrounding a particular topic, is well established but in this form of delivery becomes an oxymoron. It is due in no small part to the technologies developed as part or at least in parallel to the events of the recent past given over to the pursuit of 'reason'. The book, the pamphlet, the essay, the journal etc, construed 'the argument' as the form most fitting for the construction of the proposition, its logical and linear conduct, its cool and serene conclusion. Leading onto another custom, the quaintly named 'defence' of contentious arguments. Here is a term that places the activity clearly within the age of technology that was dominated by the cannon and the circle of wagons, and the spirit of an age dominated by the spectacle of the adversarial lawyer charged with testosterone, deep in the heat of the thrust and parry of debate. Whilst such an approach, kept in place by hierarchies and codexs inherited from another era may have been appropriate for the age of military adventures both on and off the page, it is clearly inappropriate for the investigation of the humanities and the visual arts.

Contrary to the Homeric oral tradition, the form remains locked into a material state that enabled blocks of discourse to not only be advanced but also be archived, and thus preserve the certainty of the empirical project.

As Darren Tofts has observed: *"...writing is effectively a technology of the inventory, suited to the construction of lists, catalogues and archives. In this way, writing contributed to the formation of our modern, humanistic understanding of the individual as solitary, originating centre of consciousness, for lists introduced new values of impersonal objectivity and scientific detachment from the world."* (Tofts & McKeich 1998)

This thesis then recognises the confines of the form described above. Whilst possessing taxonomic features it follows the rational path of the report, rather than the often more revealing happenstance of the aleatoric. It also presents speculation, rather than advancing tactical

argument, in the face of a technology base which besides being expensive to work with is a chimera and prone to the vicissitudes of speculative financial investment.

Part One, the Preface, and Part Two, the Introduction, provides context for the research and brings the reader to the juncture at which the core of this report in Part Three was initiated, the point at which, with both trepidation and encouragement from my first supervisor, the media artist Bill Seaman, and with the endorsement of the Head of School, Professor Liz Ashburn, I commenced on the research that led to the exhibition in early 1996, Burning the Interface<International Artists' CD-ROM>.

Part Four examines in some detail four published artists' work on CD-ROM, three of which are more recent than the curatorial research for the exhibition, which was completed by the beginning of 1995. Part Five surveys the range of practice by artists working with digital media and the opportunities for exhibition in the public spaces of museums, galleries and the street, and advances scenarios for correcting the laxity of response by the exhibiting institutions to the vigour with which Australian artists have represented their work and ideas in international forums.

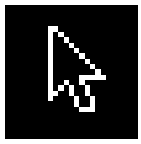
Part Six has the dual function of on the one hand, closing the written thesis with some conclusions about 'interactive multimedia' and its current usefulness as an art medium to the artist, and on the other, as an introduction to the studio practice component of this MFA submission. This takes the form of a prototype 'experimental' version of an interactive CD-ROM, a copy of which is contained in a pocket at the rear of this binding.

Finally, in returning to the notion of hyperlinking, an anecdote that might help illuminate the gap between the practitioners and the institutions responsible for delivering them to audiences. It concerns an Alogonquin guide in a remote area of northern Canada who, when his non-indigenous surveyor companion turned to him and said, *"We're lost"*, responded by saying: *"We're not lost, the camp is lost."* (Kerckhove 1995)

Space in the context of this research is the infinite dimension of the contemporary electronic culture. Institutions and individuals are spectators and participants in this culture and need to be active in defining the 'information' spaces being opened up from within the culture of word technology, as primary centres of experience. The artist is very often the first to describe a new primary experience. It requires no defence, simply the resources for further description.

Mike Leggett June 1999

Part Two : Introduction
Artists' Interactive Multimedia



ARTISTS' INTERACTIVE MULTIMEDIA

PREFACE

Why interactive multimedia (IMM) as a research topic? What is the personal context for this departure?

Context: narration, description and interaction

Many years ago I received a vocational training as a photographer - later I specialised in cinematography. Soon after I worked as an editor, organising the film other people had shot, processed and printed - in the film and television industries an employee worked in a particular department[1]. The aesthetic confinement and the culture of deadmen's shoes moved me as inexorably as a lacing path[2] towards a group of film-artists gathering around the London Arts Lab in Drury Lane. The London Film-makers Co-op (LFMC) was established in 1967 and in 1969 relocated near to the Euston Road. We purchased obsolete processing and printing machinery and thereby gained access to the complete production process. We organised a cinema, publicity and an education program. We set-up a catalogue and a distribution network. We took control of the entire process.

1a

This was after all, the late 60s. And the end of cinema had been announced.

The arrival of non-broadcast industrial gauge video in the market place coincided with the advent of media studies in tertiary education - the extension of universal franchise through the democracy of the people's medium, television. The high capital cost of video equipment with low running costs (compared to film) addressed the cost of working with 16mm film in the art college environment where many of us were by now employed. Video as a capital item also looked better on the college secretary's books.

Speaking as a practitioner, it's moments like these that I am confronted with the risibility of the 'new technologies'...

The computer arrived in the video editing suite in the early 80s and prescribed the process of combining picture and sound images for television.... it was a bit like playing trains in a shunting yard. When it came to doing the Final edit for broadcast television, numerical timecode dominated the process. The cost of hiring the technology by the hour was so prohibitive that when the Final tape for transmission finally matched the Working tape, within budget, then the producer was considered lucky.

Those of us who had been keeping an eye on the creative and meaning-making possibilities of the computer since the early 70s, had always been daunted by the technology with which it was associated - and its cost, and the complexity of the meta-

language. The multimedia computer of the past few years is now being marketed in a way reminiscent to that used for the selling of domestic video - as a universal enfranchiser. National suffrage that has given us, Australia's Funniest Home Video Show[3]. Purchasing the multimedia computer does however, promise to strip away the incantations of a generation of programmers who have required of us until recently, to recite various *command line* liturgies. But in terms of computer useability, progress is at the rate that the market place commands and the tendency towards the stonemason's craft and its associated hieroglyphic codes will remain with us, particularly if there is something unusual to be done like making art. Unusual in that the codes that need to be written, or software interfaces designed for lacemakers[4], need to be manipulated in a way often contrary to the codes of social interplay and interaction.

Jurassic Multimedia

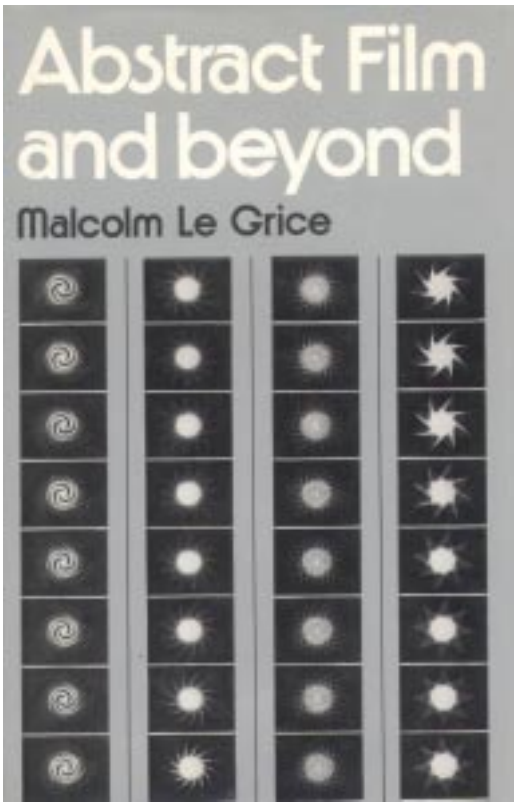
1b

Towards the end of the 1970s I had devised a form for presenting what I had been working with since the early 1960s in film, photographic and video production, both as an artist and as an artisan/technician. The form involved the organisation of films, (16mm and 8mm), videotapes, sound tapes and slide projection into a suitably equipped studio or gallery able to reproduce into the space the contents of these various artefacts. The Content then, was not only contained *within* the artefacts but also *with* the act of presentation. The technology, the apparatus present in the room was as significant as my presence. I was the ringmaster, or director, or bensai,[5] or fairground barker, standing out there in the space rather than, as had become the custom amongst many film-makers, to stand behind whirling projectors or remain hidden in the biobox. I would be equipped with various prepared texts, some on paper, some on sound cassette, and each 'lecture presentation'[6] would not only show 'the work', but also provide some background to which it was tangentially related. These would be political in character, about 'social' or 'technical' or 'aesthetic' issues rather than interpretation or anecdotes about 'the work' being exhibited. Alongside the 'contextual' material presented, content and the form of its (re)presentation was dealt with in the discussion that followed.

Recap

The form had been devised in response to a clear lack of understanding of what the artwork was 'about' amongst many audiences. The form had followed my involvement with a complex discourse that developed during the '70s around theories on representation, and the nature of the diegetic space. The tortuous polemical process and the seemingly unrelated works for galleries, cinema and television that emerged from participants in that process, needed some integration![7]

During the early development of 'avant-garde', ('experimental', 'underground', 'alternative') film practice in Britain in the mid to late 60s, some of the artists and film-makers[8] had developed an approach to film projection as a separate area of formal research, (referred to as 'expanded cinema')[9], whereby multiple use of projectors running film that had been specially shot for each configuration became 'the piece', the event.



3

Almost in opposition to such formal pursuits, a different group of writers and film-makers began to 'deconstruct' the narrative edifice of cinema, particularly as it was encountered by the mass audiences for Hollywood film and nightly television. The term 'deconstructed film' emerged out of the essentially academic pursuit of deconstructing, or analysing 'classic' narrative cinema. Inflected by the films from the 1960s of Jean-Luc Godard[10], and the pre-War work and writings of Bertolt Brecht, this was a form which, with some exceptions[11], resulted in works which took Brecht's 'alienation' theory off the stage and placed it in the lap of each audience member to juggle meaning from a melange of no plot, no character, much statement, elliptical sequence and partially referenced 'the cinematic apparatus'. The frustrations of audiences with this earnest and portentous oeuvre restricted its usefulness to select seminar groups for a period of only a few years.

However, the polemical process of working through these diversions and blind-alleys was, as has to be claimed, productive. Whilst my own film-making practice[12] had identified with the extension of the modernist project I was more concerned and aware of audience expectations than many of my friends and colleagues seemed. They were content to regard themselves simply as artists who, by established tradition[13], did not concern themselves too much with what people would feel about their work, still less what they may understand by it. My concern was to demonstrate, in an almost Brechtian sense, where it was this work came from, not only as an aesthetic practice but also as the result of a broader set of industrial, social and political circumstances.

"Before your very eyes!"

The great advantage of presenting time-based artwork as a lecture presentation,[14] (besides providing contextual material for a viewing of the work), was that it enabled flexibility in the order of presentation, and how it should be timed and paced. Taking cues from the audience and utilising certain elements of stagecraft it enabled the reception of the work to occur in a setting probably not dissimilar to that experienced by patrons of early cinema whereby the skills and persuasion of the kinematographic host (often the manager of the show or its projectionist), were incorporated into the cinematographic exposition as an element of reassurance as much for purposes of edification and improvement. [15]

At play in these events were several elements that are most pertinent to an understanding and appreciation of human intercourse and the incursion into 'the everyday'[16] of the metaphysical.

The place is a lecture theatre, gallery space, cinema, a large room. It is familiar either through habit (as for a student), or convention (a night at the flicks). It is a space formally recognised as a receiving place, where the activity is one of consumption,[17] sometimes distanced and critical examination. However, the Content that is normally encountered in these spaces is fairly predictable in its delivery, and what it asks of you the audience:

"It is a lecture - listen and watch and remember"
"It is a painting - enjoy (or examine and consider)"
"It is a movie - what happens at the end?"
"It is a large room - who's that over there and what are they saying?"
Your position, your presence is protected. Watch and remember"

When entering the ill-defined space of promenade or epic theatre, your presence is not protected. The over-defined space of a proscenium arch, framing the words and actions of a Beckett play for instance, do not cater for you either. These are spaces in which not a lot happens unless you interact with a process that opens the faculties, especially that of thought, to the collisions that are occurring between disparate events and words. This can be hard work, this can be demanding, this can even be dispiriting. This may not lead to resolution.

This has always seemed to me to be a very productive space in which to be. Even working in the 70s and 80s with somewhat clunky resources, when there was the opportunity or circumstances, this sense of collision with other people through the use of these media tools, was energising. Not only by what occurred with each audience at each performance, but also through what would emerge in discussion. This interactive process was a palpable feature that would lead to new thoughts and new artwork.

A pause.....

As much my response to meeting my life partner and the arrival of our first child as it was to the effects of a Conservative political backlash in Britain which blighted so many bright initiatives.

In 1988, upon arrival in Australia, it became necessary to begin to use the computer as a tool. Initially just to make staying in touch with all those friends and relatives back in England at all possible. A little later this led to earning a living from my fascination with what this technology could achieve and what it had by way of potential.

New Tools

In Australia in the early 90s we were fortunate in having a far sighted and imaginative group of individuals passing through the Australian Film Commission, both as employees and applicants for funds, together with various international itinerants who arrived to settle or reside. Film and television producers, and artists from a range of backgrounds were encouraged to explore the potential of computer-mediated production. In the early 90s most film, video and television producers were too busy adjusting to the shifts occurring in the national and international market places to be very interested in the potential of anything except their current project.

Visual artists had however, established a rugged reputation as utilisers of both industrial and domestic of film and video technology to do what was necessary, with scant regard to conventional economies. The film-makers, following early experiments in the early '60s, were well established in the '70s with production, distribution and exhibition facilities in each of the state capitals. The federal political changes at that time created an upsurge in the demand from geographical communities for access to television, and studios with video equipment were likewise established. The intermingling of these two communities led to fruitful collaborations, one of which was a line in video art production which secured its own following, similar to that which the film-makers had already achieved.

Groups dedicated to the promotion and exhibition of this work, from Australia and overseas, developed in each of the major capitals: Modern Image Makers Association (later Experimenta) in Melbourne, Sydney Intermedia Network (later dLux Media Arts) in Sydney, Metro Arts in Brisbane, the Film & TV Institute in Perth and the Media Resource Centre in Adelaide.[18]

This formation of active and informed artists and audience alike were open to new developments and new technologies, and it was from within that many initiatives emerged to infect both government and private institutions into strategies for funding and audience development.[19]

The New Image Research fund at the AFC was an early initiative [20] that encouraged some initial steps and enabled others to travel overseas to see work. Besides returning with news of what was being attempted, some returned with the confidence to mount the three-day Third International Symposium of Electronic Art (TISEA) exhibition and conference, organised by the Australian Network for Art & Technology (ANAT) in Sydney during 1992.

The event was an extraordinary event for focussing many peoples' vague knowledge of, and hopes for, computer-mediated work. It was the point from which several important artworks were commenced[21] and it was the point at which people used the terms multimedia and internet to begin to name the intersections they were passing through.

My own research began shortly after this event in the Computer Research Laboratory at the College of Fine Arts in the University of New South Wales. The Lab was well equipped at the time with top of the line Macintosh computers and software. The tools available included: Macintosh Quadra computers, Photoshop, Director and Premiere. CD-ROM peripherals were available, mainly for text-based reference works, but the range of titles available for CD-ROM were increasing and by mid-1994, Myst[22] had defined the fine art of game play.

This was also the year of the first AFC Multimedia Conference: the Film-maker and Multimedia.[23] If there was any doubt as to what constituted multimedia, Australians were not going to be allowed to forget it during 1994, nor the time of each of the AFC events that followed annually, and the plethora of less cerebral 'market-drive' events likewise, notwithstanding the infamous Department of Communications and the Arts Multimedia Forums.[24]

New Images

"The making of new images? From where do they arise, by what processes? Is the product of process simply imagistic - images for their own sake, or rather, the sake of captured audiences - or can they have meaning which is guided rather than directed, and function to elucidate and navigate 'what is on the tip of the tongue'"?[25]

Simon Penny observes (Penny 1994):
"Making art that has relevance to contemporary technological contexts is an exercise fraught with obstacles, not the least being the pace of technological change itself. In order to produce an artwork with any (kind of) technology, the technology must be considered in its cultural context, in the way it functions in human culture, and the type of relationship that it can have with an artist and with a creative process. These things take time."

It is asked: can the speed at which new software and hardware products are shipped, new services and add-ons are provided, can this rate of replacement of tools with which to work, distort reflection upon the outcomes of that creative process from the artist's viewpoint? Is the current gap between realising images and their critical examination contributing images which are not, of society but are, of tools? Are the new images we have been making simply, about tools?

As the Peruvian novelist, Mario Vargas Llosa has observed by raising issues of the political control of cultural dissemination, and in defence of traditional tools;
"No great literary work erases or impoverishes one which appeared 10 centuries ago".[26]

I would suggest that our project is not about by-passing useful artefacts. The process is about responding to conditions that emerge for the exhibition, (and so production), of images and media, including the written word in general.
The process is about the invention of new images:

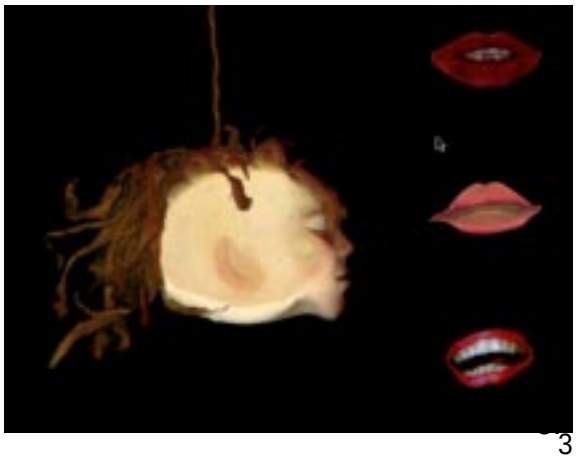
- for the sake of exploring the potential of a tool;
- countering negative and banal use, through its purely commercial exploitation;

- more important, inventing systems within the technology which, in spite of, rather than because of the artist's determinations, **reveal** the images we are seeking in a way only possible with a particular medium?

And anyway, when have we ever been able to resist new tools? Is it not an innate condition with which we have to cope?

As the three figures in Simon Penny's zone triggered installation, *Point of Sale (1992),* enunciate, [27] (among other things): *"protect your image; your image is your property; you are being watched; you are being judged;"*

Between paranoia of 'the new' and celebration of the novel, we are left wondering, Which direction to navigate? What strategy is best adopted?



3

Cyberflesh Girlmonster(1995), according to the writer Vicky Riley (Riley 1995) *"has evaded the narcissistic 'designing a new and better imaginary space' which pollutes just about every artistic strategy behind Australian interactive electronic art".* She continues, *"What is wholly interesting and significant about Linda Dement's work is that there appears to be no strategy and no narrative……she is not interested in characters cute or fierce, nor concerned with utopian notions of subverting some imaginary mass media technocracy, gender specific or otherwise."* Later Riley observes that *"For girls of Dement's generation…it is entirely effortless and necessary to include into one's art practice a healthy disregard or disinterest in the politics of representation, or affirmative narratives, which characterise feminist art from the prior two generations."*

So for those seeking navigational aids we are between the sailor's analogue lamps and the aeroplane pilot's digital radio beacon. Some users are equipped to be guided by both systems, but the 'real politik' of access to the images, both on-line and off-line is often regarded with equal disdain by artists and corporate entity alike.

At a demonstration in 1995 of the initial manifestations of the World Wide Web to a meeting of museologists, many began to leave early - "..old hat - seen this..." It was clear that they were on-line, the rest of the world was not their problem. The demonstrator meanwhile toured the sites devoted to matters of museums and art, of which there were, (even by then with the Web only two years old),several hundred around the world, most of which had wheeled out images from their collections in the previous 12 months.

The WWW seemed to me then as now to be about the possibility of a return to something of an oral culture, (richly permeated and inflected by images), after years of tyranny from the written word, as exemplified by the text-based, Unix and Internet thing.....

The precept had been established amongst that 5% elite. That session was squandered in mutual self-congratulation. No strategy was discussed for expanding the network, for extending that copper wire. The day before it had been announced that, following the takeover of the responsibility for running Aartnet[28] by Telstra, all commercial traffic would be moved off Australia's part of the Internet and presented to a new service provider, Australia Online - read Microsoft - that was an unfortunate style of the (Keating) federal government. My point is that this roomful of museum people had much to gain from lobbying, as the Broadband Services Group has done in its final report, for Aarnet to become the university and community network, to include all aspects of our 'non-commercial' culture.
When a structure can be planned that will address the need from all citizens to access and navigate, then the notion of the interactive image takes on meanings way beyond our current modest beginnings. Yes, *"These things take time"* - but there's no time like the present.

"Interactivity that merits its name", according to John Conomos (Conomos 1994), "*is more about self-directed creativity, connectivity and transformability than using the computer-screen interface as a means of reconsolidating the logocentric, masculinist and technophiliac features of Western representation."* He also raises two questions for the potential interactive multimedia artist: *"Why am I using this particular media technology? What advantages does interactivity offer me not already evident in other relevant media?"* Citing Simon Penny he asks, *"Do the interactive technologies represent old ideas in new boxes?"*

Some of these questions are addressed in the body of this thesis, some will have to wait for later. To conclude this Introduction however, I cannot resist identifying to some degree with those artists who would describe their project as being about the ineffable - that which cannot be expressed in words.

At Performance Space gallery in Sydney during February 1994 I encountered Brad Miller's *Digital Rhizome (1994)* which seemed to demonstrate more clearly than anything else I had encountered to that point what it was that made multimedia and hyperlinking worthy of serious consideration as a medium of artistic expression. Though running off the hard disc of the Quadra on the wooden table sitting on the wooden floorboards, the piece was destined for duplication on CD-ROM. It was this fact that completed the production cycle, moving the work out of the artist's studio and the art gallery and into the public domain.

4

The Public Domain

At this point in my research into the production of IMM, it became clear that work which had been completed by other artists using the tools with which I was experimenting were, with the notable exclusion of the above mentioned work, not much in evidence. It would surely save much time and reinvention if the creative and by definition, exploratory outcomes of this work could be made public.

In early 1994 I prepared a description of what an exhibition of artists' CD-ROM might entail and with the support of the Museum of Contemporary Art (MCA) I approached the Australian Film Commission (AFC) for a modest grant to research the area. This enabled me to buy the time to initiate the Call for Proposals and then follow-up the considerable response that followed, mostly via access to the Internet through the research that was then developed at the Research Lab. There was between 5-600 enquires which produced 130 pieces of work from which a short list of about 50 were selected.[29]

The MCA were "pleasantly surprised" at the quality of the work, allocated an opening date and raised their initial stated involvement from a single gallery space to three gallery spaces. From that point on I worked with Linda Michael, one of the MCA's most experienced curators, to develop the show and the catalogue and work with the 29 discs in the final selection.[30]

The research mushroomed into parts of the subject that I had not anticipated but has enabled me to see a large amount of work, attend many events and of course, think, write and generally respond to the work. Besides informing the thoughts and plans I had for making work of my own, this was also to lead into an area of creative practice with which in the past, in the mueum and gallery context, I had only partial experience - curation and exhibition design.

Notes to Part Two: Introduction

[1] Camera; sound; editing; printing; processing; set-building; writing; projecting, etc

[2] *As Inexorably as a Lacing Path* was the title of a book review I submitted to the ACTT Journal (the periodical for the Association of Cinematographic and Television Technicians, the British film & television trade union) in 1969. The book (Walter 1969) was intended as a handbook for the film editor and was critiqued for its compartmentalised approach to creative activity and 'the industrialisation of aesthetic choice' at a time - this was the late 60s - when such models were under attack, particularly from artists. The dialectic that developed in the 70s began to develop a divergence between cinema and 'artists' films'.

[3] *Australia's Funniest Home Video Show*: Channel 9, Sydney - a popular mid-evening television program series, based on and using some material from the North American version, which invited people to send in the tapes they had shot of amusing domestic recordings, usually of the slapstick, "Owww, that hurt" variety. Prizes were awarded for the most popular contributions.

[4] The popular multimedia authoring tool Macromedia Director used the metaphor of a Stage for organising all the objects that might be required on the computer screen at any one time. This was achieved by placing the objects onto a plan view diagram (based on film industry dubbing charts) consisting of many parallel channels. The visual effect of this on the average size 14 inch screen was a criss-cross of tiny boxes, colours and shapes, rather like lace or embroidery.

[5] *To the Distant Observer* (Burch 1979) is an excellent description of how cinema can so successfully make radically different cultures and cultural inscription available across cultures given a basic pre-knowledge of Japanese tradition.

[6] There were two, *Image ConText One* (1978) and *Image ConText Two* (1982) Videotape versions were made in 1984 and 1985 - see Appendix A and D.

[7] Another term from the period, 'integrated film practice', referred not to theory and practice but to a closer working connection between production, distribution, exhibition and education (marketing), processes that were normally compartmentalised in the industrial model of the commercial film industry. (Harvey 1978) (Burch 1973)

[8] Centred on the London Film-Makers' Co-op. With Malcolm Legrice (Legrice 1977) and several others, I helped develop in 1969, the first of the workshop facilities at the Robert Street Arts Lab, which grew out of the Drury Lane Arts Lab where David Curtis had established the screening program (Curtis 1971). Over the following years the workshop, cinema and distribution office moved from 'licenced squat' to 'surplus building' - about three sites in a five year period. After a long stay at the Gloucester Road site near Chalk Farm, the Co-op (and many other impoverished arts organisations), were rehoused with 'Lottery money'. Along with London Electronic Arts, the Co-op now shares customised premises in Hoxton Square.

[9] The term, 'expanded cinema' had a different meaning in the USA (as many things do), following the appearance of book of the same name, (Youngblood 1970) which used the term 'expanded' in the same sense as Tonto's Expanded Headband - farrr rout!

[10] Jean-Luc Godard had more or less ceased production at the beginning of the 70s. By the 1980s he was working on a daily basis with videotape from a studio he had established on the French Swiss border, between two worlds, from where he completed the revealing series of TV programs, *France Tour Detour Deux Enfants*.

[11] The film *Goldiggers* by Sally Potter; and *Because I Am King* by Stewart McKinnon.

[12] Filmography - Mike Leggett : see Appendix A.

[13] This was the late-60s and many of the film-makers came from art school backgrounds where such disinterest, not to say cynicism was encouraged. This began to change with the re-organisation of the art schools following 'les evenements' that impacted most of them during 1968, with the adoption of a more open means of attaining a tertiary qualification than existed through the National Diploma in Art & Design (NDAD) system.

[14] The first version of *Image Con Text: One* was presented at Exeter College of Art in a weekly college forum designed for lectures to show and talk about their professional practice, (for which full-time staff at that point in time received leave of absence of one day per week.) The presentation lasted about 60 minutes and led to such animated discussion that the College Vice Principal who hosted the event requested that the discussion, which had lasted one hour, be continued at the same time in the following week. In an institution without much of a reputation for critical or theoretical discourse, it was of great surprise and some delight that the theatre was again filled a week later for a further two hours of discussion.

[15] Something of this experience was covered in the Dawn of Cinema Conference (Museum of Contemporary Art, Sydney, 1996), a report about which I wrote for RealTime /15 'Past Presence'

[16] The Cinema of the Everyday was the title of a weekend workshop held at the Dartington Arts Centre,Devon 1982 by the film and television department of South West Arts. (South West Film Directory 1980)

[17] The term consumption is understood here to include both the delight of rapturous intake, often to excess, as well as definition from the proto-economist Karl Marx when describing the end of the life cycle of the industrial manufacture of Goods and Products.

[18] I have found the histories of Australian alternative, underground film, video centres in the contemporary development of screen culture very usefully covered in (Thoms 1978), (Mudie 1997) and (Wark 1997).

[19] The early stages of this development is well covered in Continuum V8 No1 1994

[20] Gary Warner introduced the New Image Research program into the Australian Film Commission range of project support ventures in 1989, a move which was to have a profound effect and gave Australian artists a head-start on their international colleagues. Michael Hill continued supervising this imaginative program in 1993 when Gary went to develop innovative audio-visual features at the new Museum of Sydney, employing many artists in the development of the exhibit.

[21] Bill Seaman's *The Exquisite Mechanism of Shivers*(1994)

[22] Article (Leggett 1994b)

[23] Report (Leggett 1994a)

[24] The Federal government through the Dept of Communication and the Arts took the initiative of staging informational and 'talent linking' events around the country during 1996 which were marred by the inability of the bureaucrats to conceive of multimedia as anything but a meeting of computing and television.

[25] From an Introduction by Mike Leggett to a New Media Forum session, *Is It Time for a New Image?,* at the Art Gallery of New South Wales, Sydney, June 1995.

[26] Sydney Morning Herald - *Freedom and Literature* - 13.9.1993

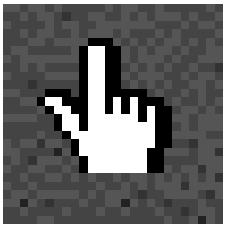
[27] (Penny 1994) op.cit

[28] AARNet was the universities administered computer network (Internet) administrative body in Australia.

[29] This process is described in Artlines No. 1/4 1996

[30] Refer to the exhibition catalogue for more on this.

Part Three
Burning the Interface
<Artists' Interactive Multimedia>



BURNING THE INTERFACE
<Artists' Interactive Multimedia>

Art and the Computer – the Cumbersome Tool

Since the 1940s visual artists have used the computer as a tool to perform more quickly the often mundane task of making something visible. Designers and architects have had much experience with computer-aided-design (CAD) software capable of producing drawings which can incorporate design changes and thus save hours of repetitive re-drawing. The publishing, printing and pre-press industries have been central to developing the word-processing, desktop publishing and photo-manipulation software, initially to make their businesses more competitive. Today, that software is so ubiquitous it has led to business opportunities not previously envisaged.

The ability of the computing apparatus to respond flexibly and rapidly to changes in a project, in a multitude of work applications, is a result of the design intuitions of artists skilled in the *use* of tools, combining with the computer scientists' ability to *develop* tools.

Multimedia

During the mid-1990s the three words, Form and Content, were modified to read Multimedia and Content.

Multimedia was the term taken up by the computer industry to describe the 'convergence' of computer applications until then kept distinct: software applications for word processing, desktop publishing, graphic production, photo manipulation, sound production and editing, video production, manipulation and editing etc. Image and graphic files, text, sound and movie files are capable of becoming source objects able to be combined using authoring applications that generate a single file. These offer interactive options for moving through the otherwise disparate material - the Content. Though the file formats stay distinct, authoring applications enable their apparent convergence.

Many, including Colin Mercer at the Griffith Key Centre for Cultural and Media Policy, have reflected upon the marginalisation that the more creative communities have been forced into by the majority of authoring application producers and distributors pursuing industry and training objectives. *"Interactive multimedia offers a chance to break down a whole series of barriers between genres, disciplines and artforms. Convergence of mind-sets, not just technologies is the issue,"* according to Mercer, *"with the ability to think laterally and more creatively".*[1]

The multimedia computer however, has achieved a greater degree of useability amongst the population than was ever possible with earlier 'user-friendly' models. By concealing the computer programming code beneath the graphical user interface (GUI), the arcane languages of a generation of programmers, the modern day equivalent of the stonemason's hieroglyphics, have been replaced by the drag-and-drop of the mouse jockey.

The computer industry by developing these tools for production, designed for specialist users rather than programmers, offer artists at the production stage, independence from profit-making orientated facility houses. Indeed the artist's approach to using these tools has often revealed shortcomings as well indicating lines of fresh feature development for the manufacturers.[2] However, a knowledge of the number of craft skills required of an individual are considerable. To make a multimedia production the skills required include: photographer, film/video camera operator, lighting director, graphic designer, writer, picture and sound editor, typographer, sound recordist, computer programmer and line producer. While some artists are capable of undertaking all these skills to a high professional standard, most restrict their expertise to a few and work within their limitations, or go out and raise a budget to be able to pay for the expertise required.[3]

Within the model worlds developed by a handful of artists using these tools, has been illuminated the significant difference between video art and multimedia art - the option to guide or navigate an order and duration of events not necessarily pre-determined by the artist. It is not an exaggeration when it comes to describing some of the works by some artists that the resulting interaction can be cathedral-like in their complexity:- blocks of images, movies, sounds and texts, assembled complete with nave, transept, choir, chapels and chapter house; and of course crypt (not to say dungeons).

Such constructs are not attempted unless the foundations are solid. Though the software interfaces that have been designed between the computer and the artist has removed the necessity, if not the need, to be able to program in code, the complex set of options that are nonetheless presented to the artist through the menu structures employed in production software applications, require a considerable amount of time to be expended just to learn interactive authoring software. As ideas are developed and begin to gel, the computer itself will constantly rely on the accurate reproduction of a digital stream generated by the software.

At complex levels of computer data management, (another way of saying multimedia), it is not only the time invested by the artist that is at stake but that of the audience too. The machine system must be able to reproduce accurately the instructions used by the computer for the execution of a design or sequence of visual and sound events. One bit out of place on the fresco might not be missed but something missing from the crownstone could bring the lot crashing down.

To prevent a crash in computing jargon, requires well designed software running smoothly through random access memory (RAM) from the memory store of the magnetic disc or the CD-ROM (Compact Disc - Read Only Memory). The CD-ROM primarily has more stable attributes than the memory storage devices normally linked to the computer's processor, such as floppy and hard discs, cartridges, Digital Audio Tape etc. as magnetic media are highly subject to interference both electro-magnetic and physical.

By 1993, there were various manufacturers marketing desktop CD-ROM burners capable of making an individual disc, a desktop technology initially intended for the archiving of company accounts and records. Besides attracting commerce of course, the technology also attracted the attention of artists.

This medium of storage could be said to mirror the impact of the arrival of bronze casting on the development of the art object - plasticity and permanence.


artists using CD-
the look-out for
y artists working
the medium, for
nce. Innovative
exhibition (eg:
n the visual arts
t it).
work (please do
OM) Exhibition,
12) 252 4361, or
SEPTEMBER 12 PAGE 16

5

CD–ROM – the 21st Century Bronze?

[3]

Desktop CD-ROM burners capable of making individual ('gold') discs has attracted the attention of *visual artists* and created the opportunity for *multimedia artists* to make their work more widely available, either in published editions or as single, one-off 'gold disc, artist's proofs'.

This chapter considers the range of strategies employed by the artists in designing the *interface* - that intimate space between the image on the monitor screen and the computer user; and some of the issues and ideas raised by the *content* of the artworks. The *interactive* and the *immersive* states of engagement are considered and also some of the innovations achieved by the artists that help to claim the CD-ROM as a storage device for the creative medium known as *interactive multimedia*.

The electronic medium popular with artists prior to the arrival of the personal computer was the video camera and recorder. Whilst the image from the video camera is an important component of many multimedia works, early work by artists illuminate the significant differences between the image from a computer and the image from a videotape.

- the quality of the image on the computer screen is of a higher quality - it is capable of having greater resolution and is able to reproduce colour more accurately;
- the computer offers non-linear options for guiding or navigating the order and duration of events - interactive multimedia does not usually have a beginning, middle and an end.

CD–ROM – a Medium Revealed

As the availability and viability of CD-ROM as a storage and distribution medium began to be felt, various problems traditionally associated with making computer art were resolved. Quite rapidly the positive characteristics of the new medium emerged:

Plasticity and Permanence

The electro-magnetic system of memory storage in computing has made much computer-based work ephemeral and fugitive, often restricting its exhibition potential to one-off installations, or playout through video and film. The archival specifications of CD-ROM can more or less guarantee that a completed work as "art-on-disc" cannot be:

- erased, tampered with, or altered;
- duplicated (if the correct safeguards are in place), thus preventing the unauthorised copying of artists work and its illicit commercial exploitation.

CD-ROM also has very good physical properties and archival specifications and therefore good prospects for financial return to artists through:

- purchase by collections both private and public, of limited editions of a work;
- the editioning of multiple runs for wider distribution by niche publishers;
- the licensing of titles to networks via servers or linked CD-ROM players.

These advantages are capable of giving assurance to the artist concerning the time and material resources invested and offer better prospects for financial compensation than rentals on films and videotapes, or fees for installation.

Cost Effectiveness

The cost of transferring computer files from 'the studio' (the workstation with hard disc/server) to 'the gallery' (the Compact Disc) has been reduced, enabling a relatively low cost of 'burning' a copy.[5] This can be as little as the cost of a 'raw' disc if a 'burner' is available. The relatively low cost of making test and 'artist proof' editions enables the work to be seen easily by other artists and researchers, curators and publishers. With a world-wide CD pressing industry now established, the cost of producing multiples and editions has reduced, further extending the potential for a financial return to the artist.

Independent Production

During the early development of the personal computer in the 1970s and 1980s, competing companies produced wide variations of computer components (hardware) and the coded instructions necessary to run them (software). The economical Amiga, Commodore and Atari brands were popular with artists during this time, in spite of their crude imaging capacities. Computer labs and commercial companies around the world, using a myriad of other systems, would occasionally grant access to artists to experiment. However, this was usually during unsocial hours, in unsympathetic working conditions, often tolerated by artists with no income or professional support.

Independence had its price. The range of computer systems and standards since then has streamlined. Now it is becoming more common for any single CD-ROM to be readable on both major but incompatible systems - Macintosh and Windows. Cross-platform developers' software can address 95% of the installed CD-ROM user-base, and has encouraged the artist to invest time and develop production resources.

Developing a studio practice of techniques specific to computer art is greatly aided by CD-ROM. For instance it facilitates the magpie approach of amassing working material. Having converted images, text and/or sound into digital form, artists can catalogue the stuff onto a CD-ROM and use discs as an archive, retrieving to the production computer as and when the need arises; no backups, no maintenance. Working experiments and 'sketches' can be economically stored for later reference.

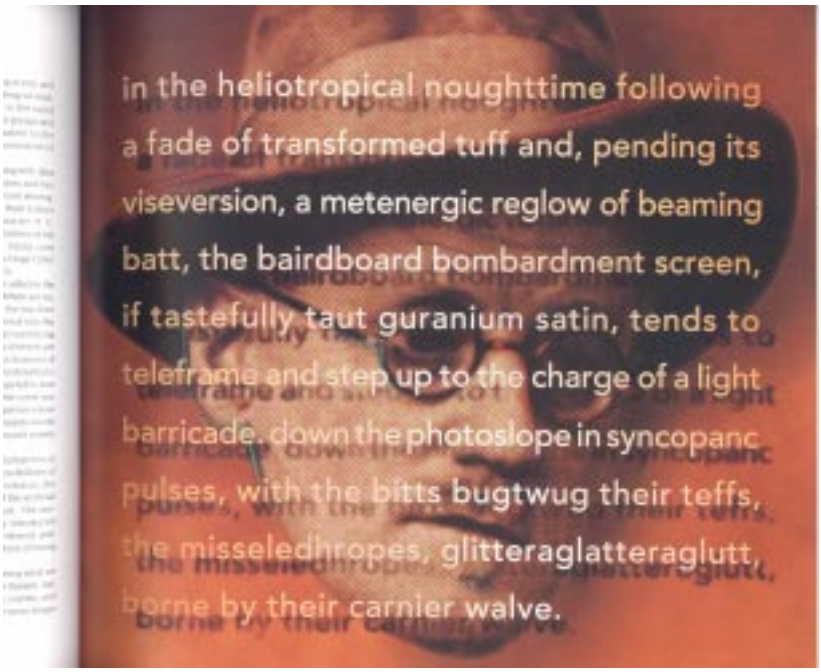
Distribution and Exhibition

Art produced using computers can be reproduced using home or office equipment connected to a CD-ROM player - in the home or over lunch at the office. The computer-with-CD-ROM-drive-and-modem, or multimedia computer, is the standard computer of the 90s, capable of connection via a phone line to the Internet and other computer networks. It is being marketed in a way reminiscent of the selling of domestic video cameras - for the creation of domestic and personal statements, using instant 'point and shoot' technology.

From 1995 onwards, the quantity of World Wide Web (WWW) sites expanded exponentially, continuing to define what the 'superhighway' might become, with artists setting the pace for works of imagination and depth. However, the arrival of data from many Web sites is sluggish, particularly where memory hungry images are concerned. For this reason, many regard the Web as primarily a publishing and distribution system with limited potential for fully interactive artworks, at least at the early stages of technical development. The passing of the Internet Classification Bill by the Federal government during 1999 in an attempt to control the availability of certain mostly visual material, increases the problems this channel of dissemination poses to artists.

CD-ROM, by comparison, has to be regarded as the best compromise among computer technologies available to artists, because the full range of multimedia (text, images, movies and so on) is able to fully function. Over the next few years artists will also begin to utilise the new format DVD (Digital Video Disc or Digital Versatile Disc) which has ten times the amount of storage space as a CD-ROM (and is capable of playing 60 minutes of full-screen movies at a quality of sound and image which exceeds VHS video cassette).

The technology will always be developing, (if not 'improving'). The works in the exhibition, Burning the Interface<International Artists' CD-ROM>, were not about the technology *per se* but about the aesthetic imagination. The imagination and its involvement with interface design and the kind of interaction possible with the 'audience' or 'user' or 'interactor', and the artist's ability to use this tool to communicate and explore ideas about ourselves, our relation to others and our place in the world.



6

Interface

The 'interface' is the conventional and pragmatic shorthand to describe the organisation of the screen, keyboard and mouse and enables the user to control the functioning of the computer. It is a jargon term inherited from computer scientists and the computer trade. However, it is a potent term concealing many meanings and implied meanings.

Interface initially had a technical meaning describing the function:
Input/Output, or

I/O

or put in its more correct and longer form:

input-process-output

Terms such as these come about as part of the development process for the technology, initially functioning as shorthand referents rather than having grammatical accuracy. In this chicken and egg situation, the sense intended is that in response to output, interaction occurs, resulting in further input, thus initiating a cyclical progression. Input is effected by the computer using the meta-language of computer code, or by the viewer interacting with the highly organised surface of the graphical user interface (GUI). The GUI conceals the computer code which provides instructions to the central processor by substituting images and icons through which interaction with the user occurs. The term 'desktop' (adopted by Apple Macintosh computers at an early stage in the development of the personal computer) equates the design of the interface with a well-ordered office.[4]

The interface paradigm was central to the explorations of artists represented in the Burning the Interface<International Artists' CD-ROM> exhibition. In a paper *Down the photoslope in syncopanc pulses: Thinking Electronically* the writer Darren Tofts asks:

"What, or more specifically when, is an interface? [The assumption is]... it only exists in the cybernetic domain, when someone sits in front of a pc and clicks a mouse. An interface, on the contrary, is any act of conjunction which results in a new or unexpected event. A door-handle, as Brenda Laurel reminds us, is an interface. So too is the "chance encounter, on an operating table, of a sewing machine and an umbrella." James Joyce didn't write books. Marcel Duchamp didn't create works of art. John Cage didn't compose music. They created interfaces, instances into which someone, (you), intervened to make choices and judgements that they were not willing to make. ... You are empowered, you are in control. Cough during a John Cage recital and you are part of the performance. That's an interface."[7]

Artists like the three cited above are much less concerned with the details of technology when it comes to employing the tools that technologists invent, whether a typewriter, a urinal, a piano - or a computer. Tools simply enable the material evidence, the artwork, to be presented to the viewer. The active response of the viewer, either through internal reflection, or a more innate and reflexive external gesture such as physically walking around a three-dimensional object (or coughing during a John Cage performance), completes the meaning of the work. The CD-ROM interface includes a physical link between the viewer and the artwork — the Mouse — making response *necessary* rather than optional.[8]

Many works explore the potential of the interface through an interaction process that navigates through the various 'screen spaces' that make up the whole work.

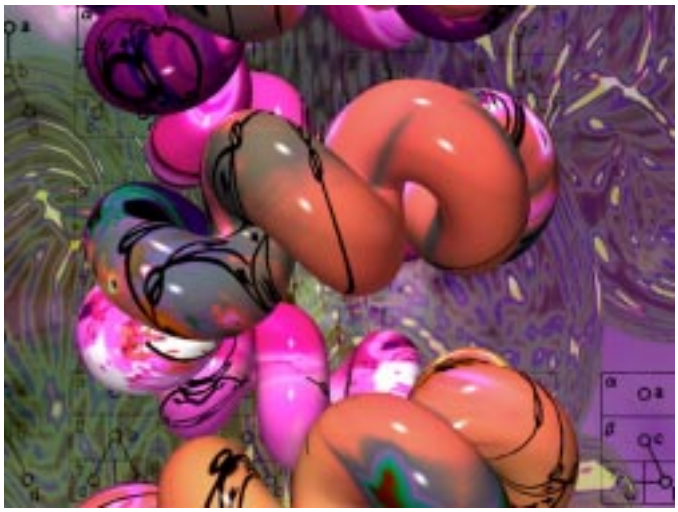
Interact / Immerse

The terms 'interactive' and 'immersive' describe the primary responses to the options of progression through an interactive multimedia interface.

Immersion follows a tradition within art history of contemplation, exploring the work through a reflective and cerebral process based on the perceiver's response to the actions of the artist. Interaction often follows innate responses more closely related to the hunter's instinct or, in less primitive terms, the existential experience, where reflection is subordinated to action.

Encountering a work's interface for the first time involves establishing a modus operandi: first, find the way in; then determine a system for movement through the work. Finally, discover how to exit, or leave the work! Most works in the Burning the Interface exhibition required quite attentive interaction but the actual method of progressing through each piece was different. It could be by simply clicking on the image of a labelled button that one was led on to further options. Less obvious opportunities for interaction needed to be determined by trial and error - very often without recourse to rational deduction!

A Digital Rhizome (1994) by Brad Miller, has been seen extensively around the world. It was the first interactive computer piece I encountered and the notes I made then I feel apply as a general strategy for many other works which place the emphasis on interaction rather than immersion.



7

Navigating Levels of Meaning

The title screen for a work may present multiple options for beginning the interactive process. Often no clue is given as to the consequence of making one choice or another.
A first level of meaning is thus quickly established - whilst sequence will have significance, a specified order will not. Hence the narrative encountered will be the unique result of how an individual interacts with the work.

The process of interacting by clicking on images or words is quickly learnt to influence progress, but is recognised as not being a process of 'control'. This becomes the second level of meaning.

Now a process commences whereby the interacting subject attempts to delineate the furthest extent of each section of the work, clicking outwards in a conceptual circle, attempting to plot 'landmark' images along the way, before returning through the maze to the starting point, to then set out to test the path again before beginning again from another point.

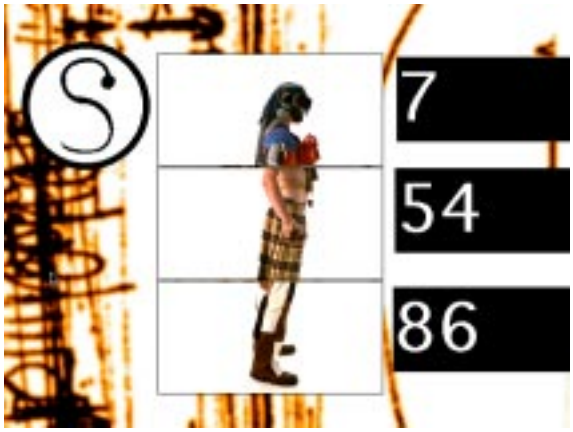
With so little to go on, the 'mazing' process itself offers the third level of meaning, as the motivational drive changes into a pleasurable era of reflexivity. Without knowing the consequences of taking options (as opposed to making choices), the form of the exploration is accepted as being purely aleatoric - a result of chance not choice. But the interacting subject's memory of images, text clusters, button slogans etc., is severely stretched in an effort to map the topography. The work may suddenly subvert a viewer's imagined game-plan. As mazing continues, 'control' is not wrested by the interactor but is at best shared.

A fourth level of meaning comes as the interactor invokes that familiar defuser of subversive strategies - interpretation. On what basis were these images/sounds/texts selected, created and combined? Does the interaction create space in the mind of the viewer to interrogate the images? What is the relationship between the structure of the work and its overt content?

The interactive process can enable us to comprehend the narrative process to which the media often subjects us. We know that constant repetition can render words and images meaningless, but to be in a position to determine for oneself the number of repetitions, returns the formation of meaning to the perceiver.

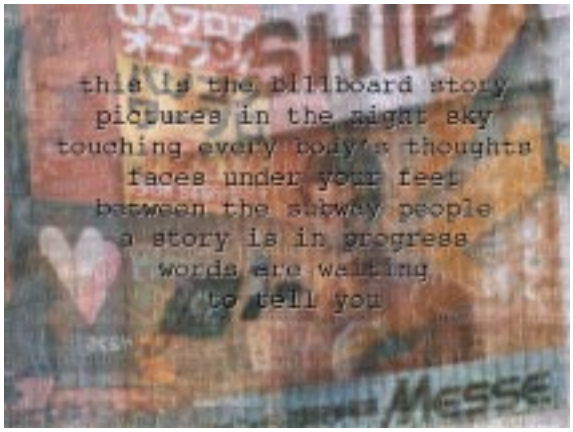
Probing the Interface (1992 – 1997)

A Digital Rhizome (1994) by Brad Miller, uses the mouse click intensively - on buttons, labelled or unlabelled, and zones, concealed or indicated with an image[9]. By contrast the anti-button attitude is represented by *Urban Feedback* (1997) by Sophie Greenfield and Giles Rollestone, where the Mouse is employed as a tool to participate in the making of a work of collage, based on the images and sounds with which we are bombarded everyday with all kinds of media. In addition the button critique was advanced in an early work by Gerald van der Kaap, *Blind Rom* (1992), and the British work by the SASS group, *Anti-ROM* (1995), who entertainingly explore the many uses of the Mouse, Clicking and Dragging, or simply Rollingover!



8

The paradigm of the printed book is one interactive format used frequently in early examples of popular retail CD-ROM titles.[10] Even the various genres are repeated: the reference book, the tutorial, the travelogue, the biography, the salacious peepshow and the novel. Some artists have experimented with these formats. John Colette commences with three options for exploring the collected data on his disc *30 Words for the City* (1995). A random selection plays a loop of the entire work; the entire work plays in a loop until Quit; or the work can be viewed interactively in 'a book format'. The clues provided in Colette's 'book' as to 'content' are not found through a contents or index page but simply through combining the two processes of interaction and immersion sequentially. Having selected an item, the linking feature particular to interactive multimedia computer work, hyperlinking, takes the 'reader' straight to the text, sound and images, without pages to thumb. You select from one of the button images, you watch until the sequence ends, then you decide what to watch next. The equation with a physical book is thus only partial.



9

Similar processes of interaction and immersion, which function together to produce electronic catalogues of discrete 'movies', occur in works such as *The Encyclopedia of Clamps* (1997) by the group De-Lux'O, a work which like their earlier *Barminski - Consumer Product* (1994), addresses the absurdities of North American urban existence and its blend of ephemeral cultural activity accessed by a blaze of probing Clicks.

The alchemical age is addressed in similar fashion in *ScruTiny in the Great Round* (1995) by Jim Gasperini and Tennesee Rice Dixon.

10

Peter de Lorenzo's two short pieces, *Red Dress* and *like ice like fire*- (1997) like his earlier work, *Reflections, Abstractions and Memory Structures (RAMs)* (1995) goes to the 'extreme' of having interaction restricted to 'go' and 'stop'. It has an entirely linear image progression - a videotape on CD-ROM - and thus appeals for the viewer to become wholly immersed with the option of freezing the image in flicker-free suspension before, by clicking again, permitting the piece to inexorably move forward again.

The question of motivation remains - why should I want to interact?

Reflection has been assumed to be the traditional role of the art viewer, but when confronted with the art produced during most of this century the response is more often the reflexive. One stage further on from the 'reflex' lies the 'reaction'. A succession of reflexes produces interaction to the opportunities presented by the artwork. Much of this early work explores this potential, essentially by navigating through the various 'screen spaces' that make up the virtual whole.
The possibilities this opens up are in opposition to the endless flow of images in contemporary culture. For this is a linear mediascape obsessed, it has often been observed, by sheer quantity of images, (whether picture, sound or text), which through repeated use have lost meaning or become meaningless, are rooted, are in stasis, have become intractable. Interaction, physically as well as psychically, proposes the possibility of re-establishing a range of meanings for the interacting subject.

The Tractable Process

The established protocols of screen culture are questioned to greater and lesser degree by artists' IMM work whether it is delivered by CD-ROM or over the Web and the Net. The promise is that there is more to see, (the scopophilic drive), and more to follow (the narrative drive) both propelling the interacting navigator forward. Like multi-channel television, this encourages the obsessive searching for 'something else' - 'clickoritis' as one observer memorably described it. The possibility of 'pulling the art apart' (without damaging it), becomes a reality when it is placed on the computer. *Venetian Deer (*1997) by the German group Die Veteranen, (as in their earlier work, *Die Veteranan* (1995), encourages to recompose their offerings and even to make images and mix sounds using the tools they provide. Once saved as a file (and if the computer has a suitable internet con-

11

nection), these can then be added to the virtual gallery the artists have established on the internet at a site in Germany to which the CD-ROM will automatically take you.

For meaning to be made however, the kind of interaction anticipated by most artist developers, is that which takes risks, with the interacting subject, with the material presented. Exploration and experimentation are the keys to this process, responses which are present in the appreciation of art in history but responses which, until the coming of interactive multimedia, involve a wholly cerebral experience - 'art of the mind'. Screen culture in particular, as well as other artforms, are prone to suffer from obsessive response and over interpretation.

In tracing points at which meaning is established, *A Digital Rhizome* (1994) for instance, quotes whole sections from Deleuze and Guattari's *A Thousand Plateaus*, both as a clue to this process, and as a theoretical backdrop integrated within the body of the work itself. As an early example of one-on-one interactive multimedia art, the piece successfully illustrates and explores the metaphor of the rhizome of the title: *"..not a beginning or an end; it is always in the middle .."*. [11]

12

It seems from an initial encounter with *A Digital Rhizome* (1994), that the element in the piece, the base unit, is the moving image which, as we know, appeals to our innate hunter's eye. Most of the movies it contains reference technology and the technology of war in particular - the hunter's eye is appropriately served. The mind reels under the weight of mass disseminated paranoia - the brutality of the Age of Print; the callousness of the computer-imaged Gulf War. Does the ability to participate through this interactive piece in 'choosing' to steer again the route which will run again the image of Iraqi squaddies running from their vehicles as a missile homes-in, make the event more meaningful in the wider context? Or does it simply reflect, through the computer technology in front of which we sit, the ability to image what previously could only be imagined? Through juxtaposition with images that could only be created by the artist on a computer, is there a dialectic space created to enable us to see a way through such terror?

During the process which I outline above, there is an option of interacting with those 'one-dimensional' images grabbed from mediaspace. Whilst it confronts us with what appears to be the conventional image, the process of interaction enables us, through part control, to comprehend the narrative process to which we are subjected by external agencies, and which is propagated by the Media.

Linda Dement's *Cyberflesh Girlmonster* (1995) takes the conventional image of the fragmented female body and re-assembles it to make new images which are both humorous and horrific - sounds and texts underpin brutal social realities. Repulsion and fascination are successfully interrogated likewise through the process of interaction.

Celebration of the intimacy of the process is enacted in the classic tome *Flora Petrinsularis* (1994) of Jean-Louis Boissier, (after Jean-Jacques Rousseau's Confessions), where the smallest of physical movements on the screen are mirrored by a move or a click from the Mouse. This gentle and sensuous correspondence, requiring the responding gesture, places the interacting subject clearly in the role of participant, whose absence would simply deny the artist's work any meaning. Meaning in the sense of experience, since interpretation of the data is not a requirement a priori, of experiencing the work. Here one revels, in the soft sound of a voice merging with the lapping of water, that leads to each encounter with the images of the young woman. The image of each plant the artist collected from the îsle de Saint-Pierre, the place where Rousseau had self-exiled himself, is paired within each of these virtual encounters.

13

"The hypermedia Flora Petrinsularis is an essay inspired by the [...] temptation to make a book which, if it cannot do without writing, does without the language of words; a book which shows, which offers something to experience but without having anything to say."[12]

Notes for Part Three

[1] From an interview that appeared in an article about the Cooperative Multimedia Centres (CMCs). Leggett, *Under a Federal Sun?* RealTime August 1997.

[2] Leggett, Mike 1994, *Interactive - a Seminar*, Art Master number 3, College of Fine Art, University of New South Wales, Sydney.

[3] This option, in Peter Weir's immortal words about making films in Hollywood, is too much 'like working in the real estate business...'

[4] This section was first developed as a paper for Intersections95, the annual conference auspiced by the College of Fine Art, UNSW for the purposes of fostering connectedness between artists and scientists. The paper was subsequently published in various forms - see Bibliography - this version is the final version!

[5] The process of making a 'gold' CD-ROM is very similar in practice to copying computer files from one storage media to another - hard drive to floppy disc for instance - by dragging and dropping the icons or filenames from one window to another. The actual disc is not actually cast with liquid metal but employs a focussed laser beam which penetrates a resin sub-state to literally burn a pattern of pits into the metal beneath. The resulting CD-ROM(R) can then be read by another computer using a focussed beam from a laser to reflect a light pattern that has been modulated by the pits.

[6] The fraught issue of platform incompatibility between the Apple and Microsoft systems is delt with in detail later in section 4.

[7] From paper presented at The Film-maker and Multimedia Conference, (AFC) Melbourne, March 1995; later as an article by Darren Tofts: *The Bairdboard Bombardment*; 21C #2 1995

[8] See more on the tactility of the Mouse in Riley, Vikki 1994, *I Touch Myself: Linda Dement's electronic bodyscapes*, Photofile No.44 April 1995.

[9] See more under Part Four: Four Reviews.

[10] Printed book technology whilst having the hypertext/multimedia feature of random access, (the ability to jump from one part of the text to another), is not able to do so as an integrated part of the designed reception of the text(s), though the initial tendency, whether with CD-ROM or the Web is to compose pages of text and images, and 'hot spots' which can be clicked or rolled-over, and then at the bottom of the 'page' two buttons, one marked 'Next' the other 'Back'. In making comparisons with the book paradigm, what is often overlooked is the fact that the interacting subject is in the same kind of physical proximity to an IMM work as the reader of a book. Connections abound!

[11] Deleuze and Guattari, *A Thousand Plateus*. The medium of multimedia itself, as well as contemporary commercial software design interfaces, has a certain rhizomatic pre-disposition in this respect and is an aspect either explored or exploited by other artists.

[12] Jean-Louis Boissier, *Two Ways of Making a Book, working notes for Flora Pentrinsularis*; issue 1 book and CD-ROM in the *artintact* series; ZKM 1994.

Part Four
Four Reviews
CD-ROM and the WWW

Four Reviews: CD-ROM and the WWW

Interface to Paradise?

The cultural shift that comes about with the advent of a new medium marks a movement away from the *'private universe of mind to the public world of the cathode ray tube'*, as Derrick de Kerkhove has suggested.[1] CD-ROM anticipates the computer networks that in their initial stages propose a collective intelligence of hyperlinked human activity. It is where modes of 'listening' are being re-defined and where the oral tradition is being redeveloped.

The contemporary arcades accessed through our computers, both on and off-line, defining the potential of the Interface in so many ways, were anticipated by Walter Benjamin at the last *fin de siecle* :

What all other cities seem to permit only reluctantly to the dregs of society - strolling, idling, flanerie - Paris streets actually invite everyone to do. Thus, the city has been the paradise of all those who need to chase after no livelihood, pursue no career, reach no goal - the paradise then of Bohemians, and not only artists and writers but of all those who have gathered about them because they could not be integrated - either politically, being homeless and stateless, or socially.' (Benjamin 1970)

If Paris was Paradise, is the modern paradise the Web? Engaging the audience in a productive relationship is the Interface we are currently seeking to imagine and create. Though somewhat eclipsed by the current fashion for things on the Web, the CD-ROM combines the potential to create complex model worlds with material immutability — its major advantage. At this transitional stage of movement towards multimedia computer networks, the CD-ROM also enables the most sophisticated development of the interface, and, besides affirming aspects of an art-historical tradition, reveals opportunities for extensive research by artists to create interfaces of the future.

The following four published reviews describe some possibilities.

- *Family Files* (1997), an interactive multimedia CD-ROM by Mari Soppela, was included in a exhibition of artists' CD-ROM curated by Mike Leggett for the Microwave Festival, Videotage, Hong Kong, in December 1997, and subsequently released with *Mediamatic* magazine, June 1998. The review was commissioned and first published in edited form in World Art No. 18.
- *Planet of Noise* (1997), an interactive multimedia CD-ROM by Brad Miller and McKensie Wark, is distributed by the artists, and the Australian Film Commission. The review was published in Photofile No.52 (1997), with the title, *Planet of Noise*.
- *The Story of Waxweb* (1989-96) by David Blair, was included in Burning the Interface<International Artists' CD-ROM> both as an interactive multimedia CD-ROM, and as a website. The review was first published Photofile No.45, (1995) as *Waxweb - photo-images Buzzing on the Wires*.
- *Beyond* (1997), an interactive multimedia CD-ROM by Zoe Beloff, distributed by the artist through her website. A shortened and edited version of this review appeared in World Art No.18 (1998).

14

FAMILY FILES
by Mari Soppela

Home movies could be described as 'family files'. In the same way as snapshots are compiled into picture albums, these images provide the visible evidence of human relationships - Faces in Places. Visible evidence as distinct from documentary evidence, which passes through an editorial process and is hence shaped according to an aesthetic and tradition which aims to address a viewer, or as Ross Gibson has observed: *"...listeners and readers exist because they want to encounter propositions delivered persuasively."* Persuasion is not the objective here but a series of pathways through an archive of home movies and the creation of a dynamic (poetic) space.

Mari Soppela in the interactive CD-ROM *Family Files* takes fragments of home movies, converts them on the computer to Quicktime movie loops and creates a matrix of nine frames on the screen. The matrix comes to life as the Mouse cursor rolls over one frame and rolls onto the neighbouring frame, freezing the one it leaves and animating the one at which it arrives. The process of working with these images enables the viewer to juxtaposition moments from the personal diary by starting and stopping the fragments at different points in their cycle - usually this involves working with two or three different loops to arrive at a reconfigured matrix reminiscent of the snaps in a photo album.

These images are the metaphor for memory itself - fragments of time, (the infamous 'frozen moment', even), suspended within the frame of recollection, reanimating and resensitising sounds and smells, reilluminating surfaces and patina, the textures of the personal past. The shaky, blurry and often scratched images on film, like those on paper, become the space and time of separation between the shared experiences represented and the context into which they are received. For those who shared the making of the images, revelations and forgotten links, the pleasurable memory and the discomfort. For those outside the moments recorded, lacking the narrative that created them, the encounter can leave the document as dry and dusty as parchment, without meaning, without empathy.

Interactive multimedia makes it possible for the observer to enter these spaces of time, place and memory, (or for the subject to re-enter them), and manipulate, contemplate and make tractable, (on the screen and in the mind), the images and moments represented. The interacting subject is made part of the process of meaning-making by 'agreement' with the artist. The understanding is that whilst the mechanics of discrete units are subject to manipulation, the accumulative effect of this is ameliorated. The interacting subject arrives at a position through active engagement with the material construction rather than a passive observation of the overall effect. The Australian artist Linda Dement has observed in her own work the importance of the physical act of using a Mouse to move over an image. This is the tactile gesture which connects the interacting subject to the virtual objects which are experienced through the computer.

The starting screen in *Family Files* duplicates many times at many sizes the image of a clock face recorded on a trip to Hannover in 1994. A choice is made from the fifteen narrative diaries: 1996 Ruopsa; 1994 Helsinki; 1995 Amsterdam, etc though the actual destinations are not known as each path is entered. Amsterdam is the city where Family Files was made - the artist's studio; her kitchen, her living room, her garden, her children. The cafes, the street, the grachts, the parks and those oh so Dutch pure light interiors..... (tot ziens!)

15

Mari Annukka Soppola was born and educated in Finland. She moved in the early '90s from a background in design and video to work with interactive media in Britain and Holland. It was her work as interaction designer and programmer with the Mediamatic group and in particular on the seminal Doors of Perception I conference documentation CD-ROM in 1995, (which won her a prize at the Digital Media & Interactive Media Festival, Los Angeles, and First prize in New Voices, New Visions run by the Voyager Company), that confirmed she had identified interactive multimedia as her preferred artform.

"Together with Tim Schofield, I program recursive code as a tool to process my memories. I have chosen a set of loops to represent a chapter in my life, like a wedding, and designed an interface - the system chooses four loops randomly each time and processes them the same way through the interaction.... It is not important what the image is but what happens to that image - exactly the same thing happens deep down in the code as does on the screen."

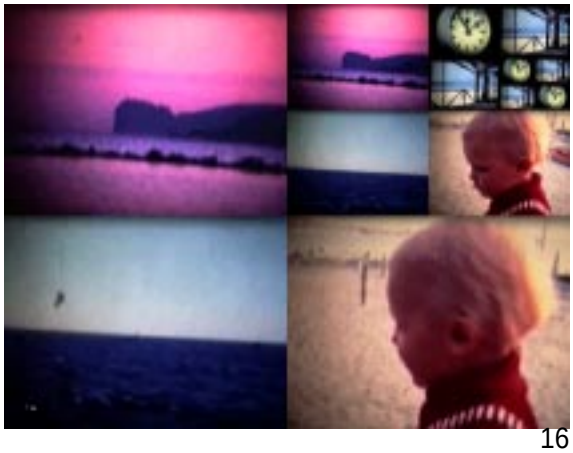
Like several other artists working in this area, such as the British 'virtual sculptor' William Latham, Soppola is exploiting the programming possibilities of 'recursive code' which, like the material of the acetate film loop, repeats itself with subtle variations.

"As the image becomes recursive, the program simultaneously writes recursive lists to determine what loop plays, at what size, in what x/y positions, according to the Mouse position. With the serendipity that is introduced to the system, the fragments of the wedding keep floating in a poetic space, keeping their associative values unfixed explicitly. In this way, my memories of the wedding keep changing. Different sets of the loops introduce surprising elements, like similar colours, with whom I can keep playing and daydreaming. In this level, it is that particular fragment and image, that particular moment in time that I perceive most strongly."

At the beginning of each passage through moments from this life, a music track begins. It continues without pause throughout each engagement with the visual material. Her partner, Leon Anemaet, who prepares the soundtracks, likewise develops associations through music with distance and memory. The chorus from Sibelius's Finlandia (re-worked, re-presented), waltzes through a trip to Helsinki; and imperceptibly begins again if the time taken interacting with the matrix of images demands more time than the length of a 5-10 minute music track - forests, lakes, sunlight, boats and gorgeous, gorgeous, laughing friends and family.

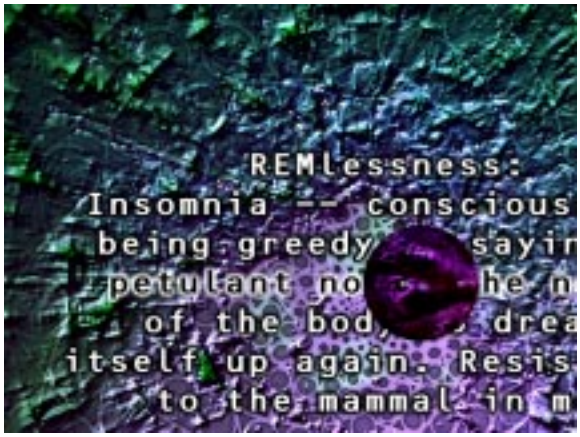
The interaction is minimal. This is an immersion into a database through which one moves as through a forest or a crowd of people, moving this way and that way, never following the same path, rarely pausing for the same amount of time. Duration is the substance and the subject of a meditation here - and identification with moments common to all. Though the setting is northern Europe, the scenes of town and country are a symbolic topography into which the process of interaction inserts the subject. There follows a complex but conscious process whereby personal identification with the visual and sound elements work in parallel with interpretation - *"..this is me, that is them..."*.

Each transition from one matrix to the next is momentary, by way of a full screen enlargement from one of the frames in the matrix. The image is broken down (rasterised) into components of pixels grouped into squares, enlarged from the smaller (home movie) images. Like the frozen frames 'created' during the interactive process, the image that is briefly on the screen is tenuous, fragile, breaking into bit-mapped components of colour and line. They mirror the matrix of memory that seeks to fix order and sequence but which, when trying to comprehend with mental powers, or even control with a Mouse, constantly slip and slide away.[2]



16

PLANET OF NOISE
by Brad Miller
and Mackenzie Wark



17

Encountering (what turns out to be) the central space of *Planet of Noise (1997)* is like entering the psychic space of an urban existence, with the flak and shash that is the backdrop to our continuum, there in the space contained by eyes and ears, screen and speakers. This is no virtual space. It is the flat space that jangles us by day and night, which rocks our senses with the artifice of colour and layout, which entreats any suspension or suspicion with the sweet reason of word play and tinker bells. It is the centre, off-set, re-centred, re-framed - so that reason cannot function, so that the tension between gibberish and illumination can be asserted. This is unsettling, this is unclear, this bugs the question - "..is that all there is?"

The little orb revolves and circulates. No sapphire planet floating shipshape in its solar orbit this one. Each time it is seen, it wears a different coat of texture-mapped ex-otica. The interactor's mouse chases it away! It will return, bouncing from the off-screen wall, the ball with a dog, and imitate the actions of the bouncing ball, leading the eye along the words - and then down the words, and then across the words, and then … away, somewhere.

"Sunless: Planet of Noise. Planet orbiting no sun. Spinning itself out of itself."

This little orb is actually the gateway forward through the exhibition, enabling one 'frame' and its associated sounds, to be replaced by the next. But, without resisting the anthropomorphic metaphor, first you have to catch it as it darts around, learn its habits, anticipate its re-entry, ambush its intention. The caught jester. Clicking it moves you on - at a brisk pace past each 'frame', or in more engaged manner, with each one.

At each interface the mouse rollovers (not rolls over) the on-screen text and triggers a female voice. She recites part or all of the phrase or saying. This is definitely not the well known phrase or saying encountered in the reference library (or even Channel Nine's *Catch Phrase*).

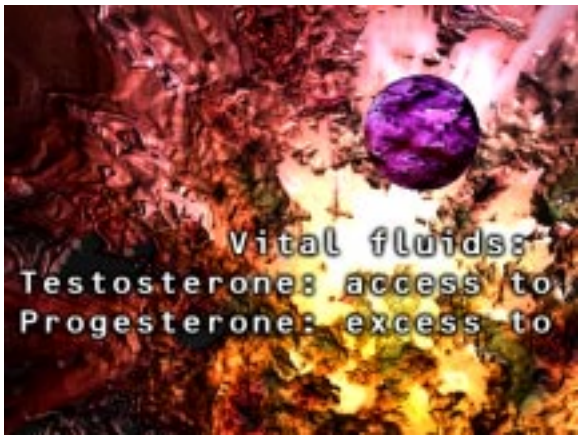
Brad Miller and Mackenzie Wark have collaborated to produce *dimensional* aphorisms:

"High Fidelity: the complete relationship - to love and to lie; to be loved and deceived".

At the appropriate rollover the voice reiterates: "to love and to lie; to be" as a coda of the original - until the mouse rolls off, returning some attention to the richly crafted backdrop.

This is a visual backdrop with full stereophonic accompaniment, employing the full gamut of sampled and electro-synthesised loops, prepared with contributions from Jason Gee, Derek Kreckler and Brendan Palmer. The visual backdrop over which each aphorism hovers is the digital equivalent of a medieval tapestry. These are mostly flat surfaces which have been texture value-added in Photoshop, (with some algorithmic conclusions to Mandelbrot's work on Fractals). There are also surfaces directly re-purposed from Miller's earlier seminal work, *Digital Rhizome* (1994) including the 'infini-d worm hole' three-dimensional forms that featured so centrally in that hypercarded piece. In an encounter with *Digital Rhizome*, an early exploration of hypermedia (now called multimedia), it is soon realised that whilst the sequence is the unique result of how each interaction proceeds, the process of interacting is learnt to *influence* progress but not 'control' it. This is the case too with *Planet of Noise*. However, the 'mazing' process of clicking outwards in a conceptual circle, attempting to plot 'landmark' images along the way in order to map the topography of the piece, is not possible. Neither the other diffuser of subversive strategies - interpretation. There is however, a list on the jewel-case cover of Mackenzie Wark's aphorism texts, enabling a sense of proportion if not place, to be maintained.

Aphorisms are pithy sentences (wittily) expressing a precept or principle. Besides being economical with language they impose that moment of reflection which allows the individual readers personality to explore and extract a full meaning, if not several. Such interaction is at the core of *Planet of Noise* and is both the form and content of the work.[3]



18

Dimensions of extra-textuality are added to the aphorisms. Besides recitation, the mouse rollover might trigger a slogan ("..discovered!"), or a sound extract, events which sidle into the general ambience of the sound loop that runs behind the displayed words. The events are of course the 'bites' which the doorstop journalist has made so famous - those ten-second sentences which summarise the situation, the position, the event; a speech, a disaster, a success, a discovery. Moments elevated by attention, by a framing, editing, honing process which digests the occurrence into its accepted category, ready for uncritical consumption. Digital mediums are perfect for doing this since each pixel, each fraction of a waveform is replaceable, removable - revisable. To remove the photo-image from having a privileged relationship with truth is the implication here, by placing 'photograph as evidence' into the doomed archives of history and confirming the documentary and the photo-journals as works of *creative* endeavour.[4]

Planet of Noise word fields are separated from the backdrop by an aura, (actually called feathering in the Photoshop menu), bathing the typography in a supporting cushion of ethereality. Whilst words, backdrop, recitation, music, effects, your friendly playful bouncing ball AND the subtly changing indicators of the cursor icon itself float before your very eyes in off-centred profusion, your brain begins to engage with dimensions of meaning which extrude somehow behind the image at which you gaze.

Meaning is returned to the subject. There is no link here, other than the metaphysical. No coded text which ejects the reader to another text on some other site on the other side of the world or another sector of the CD-ROM. Immersion here is sequential, following the predetermined path around the virtual gallery's hidden walls, formed as they are, invisibly, into ten rooms (or Zones) - Eden Free Trade Zone; Republic of Sadness; The Military Entertainment Complex - which group each aphorism into an association with the reality of contemporary real-politik. And the way out of each room? Back to where you started. Is the metaphor complete? Well no, remember we're dealing with a figure of speech here which places it's meaning clearly at your door. Stop? Well, not yet.... [5]

WAXWEB
by David Blair

When exhibiting photographs the context for presentation is often out of the hands of the photographer. At worst, they are slung around the walls of a room by a gallery manager; or scattered across some pages by a picture editor; zoomed and panned by a caption camera; or emblazoned from the screen or hoarding. Even when Chris Marker frames and edits *La Jetee*[6], the feature-length film composed entirely of still black and white photographs, are the conditions for projection as the film-maker would have wished?

19

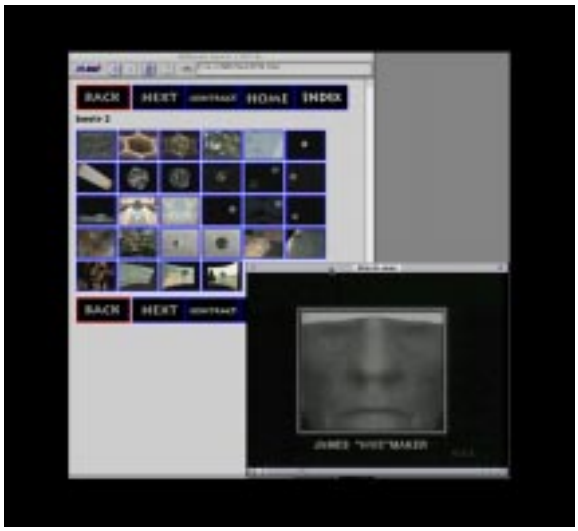
The computer screen is a space that is developing as a viable option for the exhibition of the photographic image, particularly as part of the on-going development of the multimedia computer. This offers the option of interaction with images and the integration of typography, graphics, small-screen movies, sound, text and 'other means of reproduction yet to be invented' . The circus that is multimedia is currently suffering its baby blues. The hype has grounded. The production techniques and budgets necessary are too close to a small feature film. However, there is plenty yet to be done in these new areas of art-making and distribution, primarily with CD-ROM and the World Wide Web.

Initially, assuming the space in which the screen is sited is neutral, what are the variables which will affect reading the picture on a computer screen? Picture fidelity is affected by two factors: the fixed resolution of the standard monitor - 72 pixels/ dots per inch/25mm; and the number of colours available for 'mixing' - from 4 to millions depending on the monitor setting selected on the computer. This factor is affected by the processing and memory resources of the computer but broadly speaking, the more colours, the slower is the picture drawn.

Image storage is the other main variable. Even with an image which is full-screen, (640 dots/pixels by 480) and 256 colours, the digital file-size of the image would require 300 kilobytes of disc space to be stored, ready to be processed to the screen. Seven images to one floppy disc is a limited number for distributing. CD-ROM in its Kodak form (Photo-CD) was introduced as the blandest mode of the presentation of images though very convenient and with a lot of storage space and used mainly for the conveyance of images with resolution suitable for magazine reproduction.

Artists were among the first to pick-up the broader potential of the CD-ROM medium as it emerged two or three years ago from the industrial stage to the desktop stage. Practitioners already using the early versions of Director, Photoshop and Illustrator could now see a way to getting their work off the fragile hard disc locked inside the computer and into a distributable form as a series of pits burned onto the more durable material of a CD-ROM, a medium also useful for the efficient storage of images collected as part of the production process.

As a means of conjoining a great multiplicity of material and sending it across the world and as evidenced by recent research, CD-ROM has come into its own. However, the unusual number of skills that have to be acquired for artisanal production by the individual together with the excruciating nature of some of the software which, in the electronic age, has re-introduced the hazards of lace-making to interface design, make for an extended production period and thus the danger of ossification of ideas and concepts contained in the work - not much room for improvisation and spontaneous reaction.



20

The World Wide Web, as the test-bed for the heralded information superhighway offers some relief here, and requires a little explanation. The Web is the part of the Internet which is fully capable of graphically displaying photographs, typography, text, small-screen movies, sound, illustrations and other framed graphics. The setting-up of each screen (page) is undertaken using Hypertext Markup Language - HTML - whereby simple codes are entered against parts of the page which need to have a particular appearance, or need to be linked directly to a contiguous part of the narrative. And this is the really innovative difference that distinguishes the web medium from all others, such as desktop publishing which is what it resembles, in that an electronic link can be established to another piece of text or image on the hard disc of the accessing machine, or it could be called from another hard disc down the room, or from another computer on the other side of the world. The software required to both 'view' and 'make' the hyperlinked pages is currently freely available. All that is needed to view is the connection to the Internet - this will vary according to the facilities offered by each service provider. To park artwork on a hard disc which is accessible 24-hours a day - a necessity if you want international representation - is a matter of renting space from a service provider; or from within an institution, borrowing the space.

This hyperlinking aspect theoretically will enable one copy only of each document, (picture, text, sound or movie), to be kept on one hard disc in one part of the world and for all uses of that data to be routed via networks from 'viewing' computers, wherever they may be. Currently, obtaining an image from the other side of the world can be an arduous process but experience over the next few years on the test-bed will evolve methods of doing this in a more practical way. But essentially, as a medium of distribution and exhibition, artists will be the first to evolve new means of extending its potential, as they have been in the development of the computer itself over the past fifty years.

It won't be long before the internet service providers are ready to connect homes in quantity and enable usage of this truly remarkable phenomena which, in effect, gives anyone at a computer access to literally millions of other hard discs and the different kinds of information on them. But it will be many more years before the carrying capacity of the 'wires' can deliver, on demand, the kind of multimedia production currently available on CD-ROM. There is much to be learnt therefore, in this interim period, through continuing distribution on CD-ROM, and the hybrid forms. These forms allow the spontaneity of the Web to exist alongside the more grounded and substantial nature of what can be compiled onto a CD-ROM.

The process of the convergence of previously distinct mediums and the exploration of emergent computer-based forms has been tracked by several artists, but currently the New York based artist David Blair and a continuing project, *"WAX or the discovery of television among the bees"* is an good example of where imagination, besides residing in a work, responds to changing conditions for its exhibition.

21

In an embodiment as 'electronic cinema', WAX was presented in Sydney in 1992 as part of the Third International Symposium of Electronic Art (TISEA) and tipped by John Conomos as *"becoming one of the cult videos of the '90s"*[7]. Included in the TISEA program by virtue of some computer generated footage cut-in with the live action, perhaps the comment should have referred to 'the cult project', since by that time and six years work complete, the same material has since developed into new contexts.

The process of shifting from the chrysalis stage of the linear and analogue through pupation to the digital and polylinear of WAXWEB took two years resulted in Waxweb being launched to the world over the Internet in July 1994. The project combined with a parallel project in Computer-Supported Collaborative Work (CSCW), where users can collectively write, annotate, and explore hypermedia documents across the Internet.[8] Specially written software, Storyscape *"allows people in difference places to add hypertext nodes and links to a single document. I asked 25 writers scattered in US, Japan, Germany, Finland, and Australia..... I expected that the new contributors would act almost as an analogue poetry machine, creating unexpected narrative connections and material through their processes of reading/writing. If necessary, editors could go through the material, not deleting submissions, but adding indexes and other metalinking schema in order to give coherent shape to the material."*[9]

The linear narrative of the video, (which of course includes any deconstructed narrative content), was transformed before our very eyes into a database of photo-images and written text, permutated by the interaction of the 'viewer' (responding computer operator?) into a multi-interpretable, multi-dimensional narrative referred to by Blair as "image-processed narrative".

In this Waxweb form of the project all the picture and text material in digital form was conveyed to the viewer's computer over lines from the host computer which auspices Blair, in the University of Virginia. Depending on the capacity and busyness of the connection between the host and client computers so the time taken to 'draw' a screen complete with images can vary from a few seconds to a few minutes, which, when in pursuit of a narrative, can be too long.

21

Thus the next pupation to hybrid form - the substantive part of the image and text database, with the video component relocated into fifty short segments of about a minute each, together with the HTML reader software, compiled by Blair onto a recently released CD-ROM.

This embodiment of the project's material, still at an initial stage in its evolution, makes no attempt to harness the sleight of hand of the graphic designer. The on-screen appearance is reminiscent of commercial CD-ROM titles - that of the pages from a book, with titlepage, contents page, apologias, contextual writings of several kinds, and various forewords:

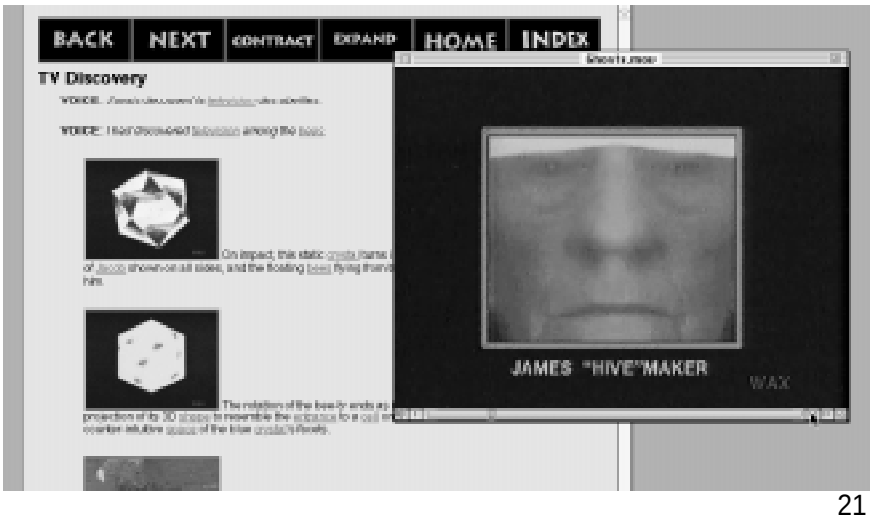
"The main body of the hypertext/picture document amounts to 3100 pages of text, and 1630 colour stills, each in 3 sizes (about 5000)..(and)... the entire Quicktime version of the movie..." [10]

Interaction with the 'story' can occur from the front on three levels - overview, medium detail and shot by shot. The viewer can also enter from the Index either to the beginning of one of the Three Acts, (entitled, Alamogordo; the Desert; the Cave and beyond), or by picking through the fragments of words and images accumulated by the project over the eight years.

The interaction has begun - decisions have to be made. To be told a story, or to become an archaeologist?

"It's a strange story", (says the artist in one of the written documents included with the work - "One of the boldest examples of cinema as dream" says the Boston Globe). *"But it is a story, and we've made a lot of effort to translate the time-based version into this stop and go medium. You don't get the clock-based flow, but you get an exponentially larger amount of association and detail that are important parts of this narrative style which you can't get enough of with time-based media just yet, not until controllable multiple streams become available. Metaphorically, I like to think that the real narrative to all this exists somewhere in the 4th dimension, from where it casts a variety of shadows of itself in various media - onto film, on Web, onto CD-ROM, onto videotape, etc...."* [11]

The Prologue 'page' introduces the hero and narrator. Small photo-images pepper the lines of text. Since the CD-ROM is connected directly to the viewing computer's processor, images are drawn rapidly to the screen - this provides an aesthetic element not present in the Web version whereby, at times, large number of small photo-images that need to be drawn, up to thirty or forty for one page, do so as a rhythmic spawning, pulsing one to the next, as the computer methodically processes each image into view. The highlighted text and the photo-images are all hyperlinked to other parts of the narrative matrix enabling you to construct your version of the narrative sequence by simply clicking the aspect of your choice. The actual number of permutations of this narrative maze can be calculated against the various levels at which options are presented to the viewer in making selections hyperlinked to corresponding levels - many millions.



21

The narrative style in the Overview level is descriptive and commences:

"Hive-Maker and Ghosts
Through the lens of a projector, we enter a film.
The year is 1914, and James Hive-Maker , a Spiritualist Cinematographer, has travelled to the Antarctic in order to gather images of the dead. The next year, he travels to the Battle of Ypres, where he finds them floating above clouds of poison gas.
Hive-Maker search is motivated by a belief that the Dead live near to us, illuminated by a moral decay similar to the glow of a radium watch. This light, and their Land, can be made photographically visible. By extension, Hive-Maker hypothesises that these living lights can visit our world (and that in reverse, we can visit their world). "

By clicking an image we descend a level and have the same picture redrawn as a larger image. It is now part of a sequence of other images, each interspersed with written dialogue - in English and French.[12] (French presumably became folded into the wax during an earlier collaborative stage with a French-speaker.)
The randomly generated narrative sequence is no stranger to writers as a means for exciting the imagination and commencing a technique of writing based on the act of editing - in recent times the French surrealists of the '30s and the junk writing of William Burroughs. In the Waxweb, in common with much of the emerging interactive art, there is no clue as to where you may be led by taking a highlighted option. Here, an 'indomitable' style reminiscent of boys adventure writing sets the tone for motivating the hyperlinked explorer to proceed. Hints at all manner of animal, vegetable and mineral occurrence abound, tainted with a whimsical uneasy sense of paranoia and general foreboding. Photographs from many sources plop into view generally of a minimalist nature and so confounding interpretation of a too literal kind. This is left to the fantasies of the writing in combination with the imagination of the reader, and so is reminiscent of other text-photo-image productions by various photographers, publications[13] and film/video-makers of the '60s and '70s - the 'golden age' of contemporary experiment? Individual photo-images sometimes leap out, usually the digitally spliced kind - juxtaposition and the unexpected within the unifying frame continue to grab the hunter's eye. As one slips from one level to the next within the snakes-and-ladders narrative space, the abstracted characters encountered remain as distanced as Brecht demanded but without the moral drive or direction within or without the process what is left is, as a 'statement', contemporary, cool and insipid.

What is confirmed is the other process, the existential, 'WAX, the discovery of meaning-making amongst multimedia users'! Memory, the crux of narrative, (and yes, computers too), is tested and teased like Delphine Seyrig's[14] and that of you the interacting computer user. As the fascination wanes for the cohorts of characters, the Hero and the Hive-maker, the active subjective memory is tested and tried as we struggle to 'fix' a photo-image, recall it, replace it, retrace it, and then to find it within the matrices, using the narrative incidents as clues to navigation from one gallery level to the next. Re-align it, retrieve it, first to the screen and so to active memory - is this the one? It doesn't quite match. Next frame? Could it be a sequence of film frames with the fractional difference between each one? Is this where meaning is reduced to a tonal span?

Currently the enterprise has gestated another step from involving invited collaborators to an open invitation.
"Waxweb 2.0 is an html-speaking multimedia MOO, and as such is a dynamic document. MOO's are tools for computer supported collaborative work and play, etc., which allow real time intercommunication - they are text-based virtual realities. ... We have used the dynamic processes of the MOO to make it possible for visitors to add hypermedia to Waxweb. Using a forms-based interface, users have the ability to make immediately visible links from any word to any other word, add comments to any page, and also to create their own pages (or many pages!), thus adding to narrative of the main Waxweb." [15]

So, the writer/creator is elevated, and the critic is retrenched - if you don't like it, change it! The viability of this precept I have been unable to test using the early version explored, but given the project's track record, it will work in a way that will make visiting the Web site a kind of pilgrimage - an act of faith and an act of confirmation of the scope of the concept, the extent of which ("..and that's not all..") is still being defined, with fully networked virtual reality interactivity of narrative and hyperlink within a 3D world, (using VRML or *virtual reality modelling language,*)

This further extension, to an endlessly evolving grand project, takes the photograph into a context for presentation which is clearly within the hands of the photographer, though only as an initial, certainly provisional act, within the context of a MOO. Maybe the notion of the MOO, which theoretically can link every collection of images on a computer to every other collection of images on any other computer, announces the end of the director, the curator, the end of the cultural Frame? Well, no. Because like every other institution, it is the users, in most cases, who determine, for the most part, for what the organism is to be used - if there are enough people who want to be directed, they'll make their particular MOO.

The historical point we have reached is the equivalent to that reached by cinema having established the principle of the moving camera but prior to the dynamics introduced by editing - about the time Munsterberg wrote his study in 1916 of 'the silent photoplay'[16]. As an organic entity, WAXWEB is an early model of future spaces. These will re-introduce an aural culture, richly inflected by the images and sounds of its users.[17]

BEYOND
by Zoe Beloff

21

Beyond enters the *fin de siecle* - that of the 20th century for the production of this interactive CD-ROM and the 19th century for its point of reference, for its sources. Both periods are characterised by rapid technological change directly affecting social intercourse.

The notion of discourse - the development of ideas and themes occurring as a series of responses which can be asynchronous and cyclical rather than following a singular and linear progression - can be closely mimicked by the modes of navigation made possible by interactive multimedia. *Beyond* uses the tool as metaphor for the navigation of aspects of late-19th century discourse. Centuries of inherited belief weakened by the then recent action of the Enlightenment were being challenged by new systems of knowledge. Technology and more importantly, the corporate power this gave its owners, was claimed by detractors at that time as in our own, to be at the expense of the imagination and liberty itself. Beloff examines some of the swirls and eddies created by this process.

The wreck of a rural hospital in a site surrounded by leafless trees is the launching point for excursions into readings, (the sources of which are diligently listed in a thesis-like bibliographic section). Cross-overs to the contemporary world are not easy to come by but are accessible through both the familiar (Baudelaire) and the unfamiliar (the French psychiatrist Pierre Janet), and W. Benjamin, who's writings in this exploration delineate the edge closest to our own time.

"And why Baudelaire? He was the first great writer of the modern city, the first modernist. It was he who first defined this idea of "mental geography" as a state of mind. The city shot through by allegory. He was the archetypal flâneur - while my work might be described as an exercise in digital flânerie!" [18]

The assembled texts, as performances, are accompanied by photographs and film of various goings-on in the living-rooms of the "experimentalists" of the time - seances, parapsychology, the paranormal, (evidenced in one memorable moment with the title *"rare example of a nude ghost photograph"*), pornography, dress-ups, trips and expeditions.

"I have been interested for some time in early serial films particularly those of Louis Feuillade (Les Vampires) - I love the way he made up the episodes of his serial films as he went along." [18] Whilst the work is imbued with ideas of the time, Beloff draws parallels between multimedia and the then developing technology and aesthetic of cinema: *"No one makes serials any more so I decided to make a serial and put it on the Web. It wasn't a literal narrative serial, it was just me, travelling in time and space, sending back reports each week, exploring the relationship between technology and imagination from around 1850 to 1940."* [18]

Beyond commenced by using a tiny QuickCam camera feeding directly into the computer to make QuickTime movies which though of postage stamp dimensions were hungry for space on the hard disc. *"It became so enormous that I transformed it into a CD-ROM. Everything was done "live", I projected the film, played the music and read the texts often all at the same time. I just spent the day starting from a rough idea, no notes or plans, setting things up in my house, trying things out till something somehow worked. I love to throw myself into something and surprise myself. It was more like "casting a spell" than making a movie."* [19]

The artist records her interventions into the showing of the found footage by, for instance, suspending words on transparent material in front of the image. At other times Beloff appears whilst footage projects behind her as the narration proceeds. Objects are introduced to accompany the reciting of the words, completing the rich visual collage, accompanied by a sound mix of the recited quotes, (in a funny squashed declamatory voice), which drop names from the period like so many leaves in the virtual scene outside. Music of the period, both symphonic and ensemble, complete the effect of synthesising decaying, mouldering and essentially private goings-on (at the bottom of the garden) in this deserted country hospital, which *"resonate more with the imagination through atmospherics and a kind of moodiness"*, in the words of Judy Annear.[20]

"If Baudelaire and Benjamin might define the circumference of the circle, then the centre I think of in the person of Raymond Roussel and his relationship with his doctor, Pierre Janet. It is Roussel's madness in the form of his novel Locus Solus that radiates outwards..... Written in 1914, Locus Solus simply recounts a tour of the estate of a famous Inventor Martial Canterel (who was modelled on Edison). One by one, bizarre mechanical inventions are described. Roussel's explanatory mania always goes beyond the fantastically detailed mechanical descriptions of moving parts, cogs and wheels." [21]

Much admired by the French surrealists, Beloff recounts that Roussel's novel goes on to describe the Ice House. *"Here we see a series of dioramas which are open to public viewing behind glass. Within each little set an actor performs the same melodramatic set piece over and over again with uncanny exactitude. These scenes become truly strange when we discover that all the so called "actors" are dead. ..... Up until the turn of the century, the Paris Morgue was an extremely popular place of public entertainment. ... Here spectators lined up around the block to see dead people, criminals, unclaimed dead children, ... positioned behind glass, suitably chilled in rather pathetic tableau."* [21]

The technologies of the time are both reported upon, fantasised about and simultaneously become a mirror for the image-based technologies of that time, the Nickelodeon and the picture house.

QuickTime VR (Virtual Reality) is the tool which presents us with 360 degree navigable images of the grounds to the desolate hospital and its smashed interiors. 'Virtual graffiti' are superimposed within these, the 'hot spots' for hyperlinking to the formally prepared video pieces. Prepared as discrete entities these are observed, from beginning to end on a tiny central screen, the interaction being confined to selecting a pathway from one 'screening' to the next. It is a productive pathway, quickly producing sometimes surprising, sometimes cyclical movement onwards. In spite of this process operating in the non-linear space of multimedia it has a clarity and luminance that intrigues and amuses.

"It is a solitary experience, both for me making the work and also viewing the work. This I think allows fantasy to flourish. The computer is very much a space of fantasy on many different levels." [21]

What is named 'Screen Graffiti' is the film material from the first 30 years of this century that Beloff has gleaned, Benjamin-like, from the flea markets - the clawed home movies, the flickering newsreels and the expired porn. The Hindenberg airship features in the opening 'title sequence' floating over New York City, the artist's home. This image sets the pattern - writers from the latter part of the 19th Century, are juxterpositioned with incidents that occurred in the first part of the 20th Century, orchestrated by the multimedia technology available at the end of the 20th Century.

To complete the encounter, (as we approach the end of this century), in the closing title shot the film is reversed and the Hindenberg rises from the ground again, extinguishing its flames and floating off to hover again, icon like, on the screen of the computer. [22]

Notes for Part Four

[1] *The Skin of Culture: Investigating the New Electronic Reality* Derrick de Kerckhove, reviewed in RealTime/11 (Leggett 1996)

[2] *Family Files* was included in a exhibition of artists' CD-ROM, curated by Mike Leggett for the Microwave Festival, Videotage, Hong Kong, December 1997, and subsequently released with Mediamatic magazine, June 1998. This review was commissioned and first published in edited form in World Art No. 18.

[3] Derrick de Kirckhove, associate of McLuhan and now director of the Program in Culture and Technology at the University of Toronto, in his book, The Skin of Culture, employs aphorisms to different ends. In the book, one of De Kirckhove's concerns to direct us away from the literate ear and toward the associative of the oral ear. Indeed he uses an aphorism in doing so: *"Our neglect of the ear may be one of the prices we have paid for literacy"*. Georg Lichtenberg developed the art of the aphorism in the 18th Century and devised one which shrilly warns: *"There are many people who won't listen until their ears are cut off."*

[4] The contemporary clothing advertisement featuring the photo-manipulated Yalta conference news photograph, achieves what Stalin attempted to do unsuccessfully when he ordered Trotsky touched out of all known group photographs. Of course the ad also demonstrates that exaggerated lies will succeed where slightly altered truth by concealment will fail.

[5] *Planet of Noise* CD-ROM distributed by the artists and the Australian Film Commission. Review published in 1997, *'Planet of Noise'* CD-ROM review, Photofile No.52.

[6] *La Jetee* (France 1963) a narrative that explores through several hundred photo-images and a narrator soundtrack, the experiences of a group of people who are the surviors following a nuclear war.

[7] Sydney Morning Herald 14.11.92

[8] A detailed account of how the Storyspace software enables this has been published in Media International Australia by Adrian Miles (Miles 1996) and is similar to the Storyscape software that Blair uses.

[9] "The Story of Waxweb" David Blair. Document on Waxweb 2.0 Alpha 3 29.3.95, CD-ROM

[10] Introduction "Welcome to Waxweb 2.0 Alpha 3 29.3.95" David Blair

[11] op.cit

[12] The entire audio of the film version of WAX was available in its first Web version in English, French, German, and Japanese.

[13] In the American context the work of Michael Lesy in particular with *Wisconsin Deathtrip* and *Real Life* (Lesy 1973, also 76 and 80).

[14] In *L'Anné derniére á Marienbad* the 1961 French film by Alain Resnais winner of the Palme d'Or at Cannes.

[15] *The Story of Waxweb* op cit

[16] *The Photoplay: a psychological study*, (Munsterberg 1916)

[17] First published as *Waxweb - photo-images Buzzing on the Wires'*, Photofile No.45, ACP, Sydney. Some small corrections have been made to the published version but the speculations, in spite of the temptations of hindsight, have been left in their original state.

[18] Zoe Beloff in the catalogue of the 15th World Wide Video Festival held in Amsterdam at the Stedelijk Museum in September 1997

[19] Baltz, Lewis 1998, Biennale de L'Image *a*t the Ecole nationale superieure des Beaux-Arts, Paris, May /July 1998

[20] Catalogue of the 15th World Wide Video Festival op.cit

[21] Whitney Biennale review in Photofile No 51; ACP Sydney.

[22] Distributed by the artist through her website. A shortened and edited version of this review appeared in World Art No.18 1998.