

# BURNING the INTERFACE

< International Artists' CD-ROM >

■ MUSEUM OF CONTEMPORARY ART ■  
SYDNEY • AUSTRALIA

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## PREFACE

Leon Paroissien

MCA Director

Artists have historically been amongst those at the forefront of exploration of new technologies. Accordingly, the Museum of Contemporary Art, as an institution devoted to the art of our time, takes on an address to new media as a continuing responsibility within its mission. The Museum aims to generate innovative projects despite the technical difficulties and expensive resources required to present works in new media. It perceives the need to engage multiple audiences in the use and interpretation of new technological applications within contemporary life – that many people find complex or even forbidding.

The exploration of artistic expression in the field of CD-ROM presented here has been possible only through the initiative and work of visiting curator, Mike Leggett. The MCA has an ongoing policy of working, where desirable, with visiting curators and diverse specialists, in order to maximise the expertise we might bring to bear on our wide-ranging program of international and Australian exhibitions.

*Burning the Interface* has attracted enthusiastic international participation and interest and I am delighted that Apple Computer Australia saw the potential of the project and became the major partner in its realisation. If Australia is indeed to be at the forefront of the creative development of 'content' for the impending explosion of multimedia, then any nurturing of technological infrastructure must be matched by a comparable investment in research and innovation by our artists and other creators of 'content', and in developmental support for new applications of rapidly evolving technologies. It is important that government instrumentalities are sufficiently flexible to match the courage of the corporate sector in supporting the important experimental phase of 'content' development.

I am therefore delighted to acknowledge the Australian Film Commission's substantial contribution to the research and funding of this project and their continuing support for the MCA's moving-image program. The Australian Film Commission has also supported a feasibility study for the MCA's proposed development of purpose-built cinema and multimedia facilities in the Stage Two development of the Museum.

Now in its fifth year, the MCA has already established as an evolving strand of its programs: cinema (including animation); video; television; luminal works; and sound art forms. Showing concurrently with the present exhibition is a project that arises as a homage to pioneer French filmmaker, Georges Méliès, and explores diverse other non-traditional media, especially applications of the moving image in contemporary artists' work.

*Burning the Interface* is a project we are proud to have realised, and I am confident that it will open the way for further exciting explorations of the applications by artists of new technologies.

## INTRODUCTION

Mike Leggett

Linda Michael

*Burning the Interface* <International artists' CD-ROM> is the first major survey exhibition of works on CD-ROM by contemporary artists from Australia and overseas produced over the past three or four years.

The moment for showing this work is extremely apposite. The speed at which computers are invading our homes and workplaces is well understood, and we are becoming familiar with the increasing uses to which these machines may be put. We hear an enormous amount about how ubiquitous new technologies will become in the future: 'CD-ROM', 'multimedia' and the 'information superhighway' are presented as becoming central to both our leisure and working hours. But many people have still not experienced what this might actually mean. This exhibition sets out to map an area of achievement which makes visible new ways of working with computers.

The selection of work for exhibition was made from 130 proposals from 110 artists in 14 countries, by Mike Leggett, a practitioner in digital media, film and video; and Linda Michael, MCA curator. The call for proposals was delivered world-wide primarily via the Internet.

The exhibition includes 30 discs selected from this pool, some by individual artists, some by groups, and some anthologies. In total about 100 artists' work is represented (not counting the hundreds of contributors to David Blair's extraordinary *Waxweb* CD-ROM/Internet project). At least a further 450 people were involved in support and technical roles.

The feature within computing art which has attracted most interest from artists and audiences alike has been the interactive element. The works in this exhibition provide a wealth of options for interactors to navigate their way through the CD-ROM interface, enabling different levels of engagement and varying depths of immersion. It has been the curatorial intention to reflect this diversity whilst highlighting artistic excellence and innovation.

During the selection process we came to decide that the titles that would work best in the context of the Museum of Contemporary Art were those which explored and developed the aesthetic possibilities of this interactive encounter. The focus of the exhibition thus lies

broadly in the 'experimental' area – where open-ended projects are commenced and where conclusions are not necessarily reached. Two areas of work were eliminated in the selection process: those disks which were documentation or operated as catalogues or artist CVs; and those which were developed using the traditional exchange protocols associated with games.

As befits the first substantial, long-running public exhibition of art on CD-ROM, the exhibition includes an orientation area to enable visitors to gather background information about the work, the artists and the medium. Two exhibits feature publications which distribute CD-ROMs: the long-established *Mediamatic* from Amsterdam, and the more recent London magazine, *Artifice*. Connections to the Internet and the World Wide Web (WWW) within the MCA galleries provide a window on the potential of the on-line computer as a medium for contemporary art. An index of 'art sites' on the Internet is provided for visitors to browse.

Appropriate to the discussion of a new art medium, the accompanying essays all ask questions. Dr Kevin Murray's essay, *Mouse, where is thy sting?*, sees the development of a CD-ROM aesthetic as a continuation of a certain indebtedness to the Enlightenment, as well as the result of grubbing around with opportunities proffered by technical invention: the Mouse, flies, and other insects of the human imagination. 'What now the promise?' by Douglas Kahn, questions are raised about the efficacy of artists' involvement with technology in an arena so dominated by the 'information revolution' and its midwives, the multinational companies, who stand to benefit so much from their precocious child. In the final essay, *CD-ROM – the 21st century bronze?* Mike Leggett describes the genesis and qualities of this new medium and summarises the basics of interactive navigation.

We hope that the exhibition will both delight and inform those visitors who have a non-specialist interest in contemporary art and culture, as well as contribute to the professional discourse evolving around contemporary art and technology.

## Mouse, where is thy sting?

Kevin Murray

With beat of systole and of diastole  
One grand great light throbs through earth's giant heart,  
And mighty waves of single Being roll  
From nerve-less germ to man, for we are part  
Of every rock and bird and beast and hill,  
One with the things that prey on us, and one with what we kill.

Oscar Wilde *Panthea*

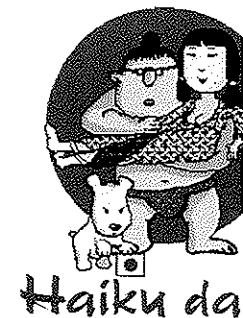
What is this before me: a pop-up toaster or an oracle? One of the critical issues in new media is whether the computer can be more than a labour-saving device: the advantages of storage and efficiency heralded in this evolving technology seem merely to accelerate the same rather than promise new insights. In opposition to the pragmatic view of the future, a late futurist like Stephen Holtzman in *Digital Mantras* can pose the challenge: 'What means of expression are idiomatic to computers?'<sup>1</sup> This certainly is a question worth asking if the experience of CD-ROM is to evoke anything more than exclamations at technological marvels – evident whenever we find the word 'cool' emanating from our lips.

### How do we go beyond 'cool'?

Part of the adventure in belonging to a modern world is its continual re-fashioning of being. The intense focus of Enlightenment culture creates in its wake a swathe of experiential waste awaiting theoretical recycling. At the beginning of the twentieth century, Sigmund Freud's American lecture tours enfranchised an entire realm of human foibles exiled from reason: dreams, slips of the tongue and jokes were re-admitted to the congress of sense. More recently, the school of thought known as chaos theory applied this interest to the sidelines of the natural world. Those phenomena left at the door of science because of their irregular

<sup>1</sup> Steven R Holtzman, *Digital Mantras: The Languages of Abstract and Virtual Worlds* London: MIT Press, 1994

from Felix Hude  
*Haiku Dada* 1993



appearance were now given special entry rights. Curls of smoke, turbulence and fibrillation could for the first time be taken as seriously as Freud did verbal malapropisms.

Recall the moment when chaos theory entered the world. James Gleick's popularised account of this theory featured vignettes which married statements from new practitioners with natural phenomena. In his profile of Mitchell Feigenbaum, Gleick frames the mathematician's comments about the art of science with a reflection on their incidental theatre:

'Somehow the wondrous promise of the earth is that there are things beautiful in it, things wondrous and alluring, and by virtue of your trade you want to understand them.' He put the cigarette down. Smoke rose from the ashtray, first in a thin column and then (with a nod to universality) in broken tendrils that swirled up to the ceiling.<sup>12</sup>

This journalistic reflection on the moment which envelops speech is the kind of sensibility required to uncover the mode of being we experience now – the moment multimedia enters the gallery.

#### CD-ROM and its aura

So what do we discover, slipping a laser-inscribed plastic disc into the computer? The first revelation is no doubt the power of technology. The ability to put masses of information at our fingertips bears testimony to the miraculous powers of the microchip – the celebrated symbiosis of information technology, ecology and democracy. But this response is more suited to the showroom than the gallery. What does the computer screen show us that we couldn't previously see in the oil painting, bronze statue or video installation?

With a question as broad as this, it is best to start with particulars. Let's take Jean-Louis Boissier's *Flora Petrinsularis* as an example. This very subtle interpretation of Jean Jacques

Rousseau's *Confessions* has a number of layers. A taxonomy of sexual encounters is paired with a series of flora species, implying a common application of rational method to romantic subjects. On a formal level, the screen is split in two, demanding of the viewer a kind of page-turning in order to reveal the video-sequences illustrating the text. And the subject chosen for these sequences? Putting aside the bawdy associations with heaving bosoms, these iterations emphasise the cyclical rhythm of breath. Intake and exhalation of lungs is complemented by rippling water and grass swaying in the breeze. The effect is a kind of shimmering diorama that implies a tender solicitude towards the world through which we apprehend a *pneuma* that pervades human desire and terrestrial life alike.

While of radically different content, the companion work by Eric Lanz, *Manuskript*, organises the practical realm of utensils within a similar taxonomical structure. Greeted at first with a hieroglyphic assortment of tools, we find on closer inspection a series of manual cameos: the iterative nature of each utensil is presented as a video animation. The rhythmical flux of breathing is here reflected in the template of action prescribed by each device. Its logic is serial and infinite. And though it seems more related to popular culture than poetry, we find in Felix Hude's *Haiku Dada* a use of simple loops to evoke the haiku moment, evident particularly in the gently descending snow.

#### The rise and rise of ambience

In CD-ROMs as ruminative as these, we confront one of the striking inheritances of digital media. Recall in the 1970s when Brian Eno aimed to produce a serious version of Muzak which gave sound the task of creating a structure in which ordinary life could be housed. Titles such as *Music for Airports* offered 'music that should be located in life, not in opposition to life.'<sup>13</sup> Like Duchamp's art of appropriation, an ambient composer need only

<sup>12</sup> James Gleick, *Chaos: Making a New Science* London: Cardinal, 1987, pp. 185-7

<sup>13</sup> Radio interview for: 'Paul Merton's Hour of Silence' on 1 January 1995, available with following quote from Eno Home at URL.

gather existing sounds within one 'aural frame' in order for it to become music. In a recent email to his followers, Brian Eno reflected on the revived interest in his old work:

'The problem is that people nearly always prefer what I was doing a few years earlier – this has always been true. The other problem is that so, often, do I!'

It seems an inexorable progress of the modern world that Muzak has been superseded by ambience. To soothe nervous air-travellers, Qantas now has a specially designed menu of sounds to accompany lift-off. And for a more virtual departure, the designer chosen to compose the sounds heralding the opening screen of the PC version of Macintosh, Windows 95, was Brian Eno himself. If it didn't sound paradoxical, we might say that ambience is the anthem of the late millennium.

It is not just art CD-ROMs which draw on ambience. Commercial works titles rely heavily on aural fields to enmesh their players. This can be incidental (casual walks down ancient Greek paths in *Wrath of the Gods*), a highlight (sounds evoking rainforest environment that is the central concern in *SimIsle*) or part of the logic of the work itself (noises like cricket chants from the desert sands of East Africa used as repertoire of geographical difference in *Encarta '96 World Atlas*). So why is ambience everywhere?

#### The ambience within

Being practical minded, we might begin with the medium itself. Given that information rather than duration is the basic currency of digital media, it is easier to loop recurrent sounds than compose an extended linear piece of background sound. Nature is readily supplied with sound patterns made for this purpose. Go bush and listen to the recurring sounds of insects, birds, lapping water – reality outside is already looped.

This contemporary attunement to ambience is quite different from our experience in

traditional theatres of nature, such as the zoological gardens we have inherited from the nineteenth century. Its symbolic habitat is the wilderness, where nature is largely hidden from sight, providing visitors with a soothing aural field of insect hum, pure light and enveloping odours.

*Not Kant:*

Bold, overhanging, and, as it were, threatening rocks, thunderclouds piled up the vault of heaven, borne along with flashes and peals, volcanos in all their violence of destruction, hurricanes leaving desolation in their track, the boundless ocean rising with rebellious force, the high waterfall of some mighty river, and the like, make our power of resistance of trifling moment in comparison with their might.<sup>4</sup>

Nothing seems further from the world evoked by today's multimedia. Kant's sublime objects 'raise the forces of the soul above the height of vulgar commonplace', whereas it is this very commonplace which CD-ROM titles offer us in their recurrent traffic of sound and image.

*But Keats:*

Hedge-cricket sing; and now with treble soft  
The red-breast whistles from a garden-croft;  
And gathering swallows twitter in the skies.<sup>5</sup>

Keats' well known ideal of 'negative capability' recommended that poets take an attitude where 'man is capable of being in uncertainties, mysteries, doubts, without any irritable reading after fact and reason.'<sup>6</sup> Though Keats' poetry is still infected with a romantic longing for transcendence, the ever-elusive nature he evokes is deliberately woven into the warp of the day.

<sup>4</sup> Emmanuel Kant *Critique of Judgement* Library of the Future CD-ROM 3rd Edition, Sec1-Book2-Para55

<sup>5</sup> *To Autumn* 1820

<sup>6</sup> Letter to George and Thomas Keats, 21 December 1817

from Graham Ellard  
& Stephen Johnstone  
*Passagen* 1995



I admit that Keats is hardly a sexy point of reference for multimedia, but his poetic strategy provides the starting point for a path along which we might fruitfully travel. From our ambient position, we note specifically Keats' struggle to find evidence of the durability of natural form in the workings of the human soul. Here, the inner self promises a similar reposeful ambience to nature: 'the simple imaginative Mind may have its rewards in the repetition of its own silent Working'. With Keats' help, we may begin to explore ambience not just as a soothing aural field but as an *inner* logic.

#### Self Loop

Moving beyond the ambient clothing of these titles, the challenge is to think what it might have to say about the human condition. This requires us to think of ambience beyond its concrete expression in sound and image to its abstract nature as a logic of self. The term 'logic' connotes a rationality whose principles can be formulated in ever-increasing abstraction. Traditionally, cognitive psychologists applied this to the understanding of personality: a core concept such as 'self-interest' explains a galaxy of thought and behaviour. In the early seventies, psychology conferences were abuzz with a new concept: *scripts*. According to American academics Schank and Abelson, behaviour could be understood more accurately as the product of mutually-determined rules. Thus there are 'scripts' for sharing a meal, having an argument and meeting a stranger. These collective scripts provide life with a intelligibility that has as much relation to the internal working of the mind as parking laws. Lately, the school of narrative psychology has extended the notion of 'script' to the life history of an individual, making it possible to map a semiosphere of biographical scripts ranging from the traditional rags-to-riches tale to the emerging pattern of second-generation Australian life stories. In this generic understanding of life we become more aware of the dances than the dancers.

The notion of an *inner ambience* is particularly pertinent to the work of Luc Courchesne. Go to *Portrait One* and meet Marie. Sooner or later she demands that you make a choice about who you are: are you politely interested, flirtatious or brusque? Your choice will determine how she responds to you. The maze-like nature of Courchesne's scripts will be evident as you find yourself returning to familiar points in the conversation...*Excusez moi?* If *Portrait One* works for us, it evokes the same repertoire of emotions normally reserved for real interactions. Am I embarrassing you? While on occasion Courchesne allows Marie to express her own non-being – Would you like to buy me? – we can allow ourselves to be immersed in dialogical rhythms abstracted from their ground in real time.

Thanks to Courchesne's gallery of video portraits, commercial interactive narratives have taken a turn away from interminable mind-teasers and shoot-outs. Broderbund's *In the First Degree* applies this dialogical interaction to the courtroom, where witnesses are interviewed and then examined in court. At each point, the choice of question critically determines the willingness of witnesses to support our case. The difference between *Portrait One* and *In the First Degree* – and this is critical in determining what goes in a gallery and what sits on the shelf – is that one is cyclical and the other linear. While the commercial title is designed to create a suspenseful journey which hurries you towards the final verdict, art work is structured more like a garden, where the side paths are just as interesting as the main thoroughfare.

In this exhibition, there are CD-ROM works that offer the same kind of cyclical logic, but on an urban level. Michael Buckley's *Swear Club* uses multimedia to render layers of personal narrative that define a collective sense of place. John Colette's *30 Words for the City* offers a lexicon of personal memory that provides an archeological substrate to urban life. And Graham Ellard and Stephen Johnstone's *Passagen* evokes the life of a city from its subterranean transport loops. In these works, sense of place is figured not as the destination of an epic journey, but as a series of circuits inscribed by the individual transits of its



population. But we needn't at this point celebrate the familiar trope of the underground rhizome: the structure is still logical rather than aleatory. It is our place *within that logic* which is the substance of our business before the screen.

#### Life as an insect

Having arrived somewhere beyond 'cool', to a Keats-like world constituted as concentric layers of natural and mental iterations, we find ourselves called upon to act. We take the mouse in hand and move freely between frames – clicking, dragging or simply locating objects on screen. This unfettered extension of ourselves reduces our body to something like an arrow or small hand, roughly one centimetre high – about the same dimension as an insect.

Our insect-like freedom to pry into virtual worlds – 'the fly on the wall' privilege – has its deadly price. In an anthropocentric world, it is the insect which bears the drudgery of mortality. Insect corpses lie strewn around even the most peaceable of homes – more as dust than flesh. Accordingly, our own labours at the screen are doomed to extinction, but no one grieves. This terminal existence does add urgency to the question of what we do during our cursory life on screen.

That is our business at hand: how to be a screen insect, buzzing the interface. Practically, this means learning what kind of business our cursor is expected to perform – a task which CD-ROM can transform into an aesthetic experience in itself. *Die Veteranen* is especially rich in these micro challenges, such as one particular phase when the cursor becomes a tiny body that cleans pixels from the screen. These specific tasks are, however, framed by a more general ascesis which we must undergo if we are to adapt to our screen environment. Moving from human-oriented desktops, such as word processors, to the more exclusively aesthetic works in this exhibition, we must learn to restrain the more purposeful index finger that rests on the mouse clicker. Like the use of lower case letters that is becoming email etiquette, interface designers often favour less formal extensions of self into the screen: clicking these

from Jean-Louis  
Boissier *Flora*  
*Petrinsularis* 1993

screens is like putting a postage stamp on a pre-paid envelope. Thus ambient works such as *Flora Petrinsularis* are activated by hot spots rather than buttons. We learn the art of surface tension.

Beyond the cursor, there are more abstract realisations of insect being. David Blair's hyperlinked *Waxweb* provides a gripping tale about the uses of 'bee television' in understanding a plot conceived by the future dead to engineer a return to the Garden of Eden during the Gulf War. It is not so much the literal subject of bees which is pertinent to this metaphor, but the way we are interpolated into the narrative. The linear narrative is very much a frame to support the business of navigating its thematic fretwork. The freedom to expand and contract the story provides us with the ability to flit from theme to theme – not unlike the beekeeper as terrestrial astronaut who moves anonymously through the military-industrial complexes in *Waxweb*. Round and round we go...

...and where does it take us? While the human history that leads us to the third millennium is commonly seen as our victory as slaves over the masters, at the more cosmic level of Gaia, we know in our hearts that the insects we blithely crush underfoot will eventually be the ones who rule the earth. Rather than be left behind, digital prophets can already be heard heralding a posthuman destiny in network colonies. Kevin Kelly's extension of chaos theory in *Out of Control*<sup>8</sup> uses the hive metaphor to reveal the self-organising structures emerging out of contemporary technologies. If we think of ourselves less as a microcosm and more as a node, then a level of complexity might be achieved that ensures the survival of the human system – so Kelly argues.

<sup>8</sup>Kevin Kelly *Out of Control: The New Biology of Machines* London: Fourth Estate, 1974



Grande astrance  
Le Chasseron, 26 juillet 1993

As you might expect, though, there are more sober, poetic precursors to this notion. The eulogist of romanticism, Rilke, wrote these words to his translator:

Everywhere transience is plunging into the depths of Being...It is our task to imprint this temporary, perishable earth into ourselves so deeply, so painfully and passionately, that its essence can rise again, 'invisibly,' inside us. We are the bees of the invisible. We wildly collect the honey of the visible, to store it in the great golden hive of the invisible.<sup>9</sup>

This is an odd conjunction: their nineteenth-century sensibility and our frenetic interfacing. In the end it is our imaginations that are pollinated by the fields of sound and image which we diligently work with our mouse – imaginations which have been jaded by too much info-surfing and networking, but are free now to stand alone and imbibe the rare digital epiphanies awaiting on the small screen.

<sup>9</sup>Rainer Maria Rilke 'Letter to Witold von Hulewicz, 13 November 1925' *Selected Letters 1920-1926* (trans. R.F.C. Hull) London: Quartet, 1988

Kevin Murray is a Melbourne freelance curator/writer whose recent projects include the art of manual labour (*Symmetry: Crafts Meet Kindred Trades and Professions*), the court of fictional entities (*How Say You*), other colonisations of Australia (*Turn The Soil*) and the future craft revival (*Shock of the Old*). For details about these projects, see 'http://werple.net.au/~kmurray/index.html'

Thanks to Mike Leggett, Lisa Logan, Les Walking and Paula Dawson.

## What now the promise?

Douglas Kahn

Independent artists working with CD-ROMs are peculiar pioneers: they are forced to take several steps back before moving forward into a world of promise. What they might accomplish during this initial retreat is all the more remarkable because they face inertia while others think there is nothing but momentum. If, as some people assume, the CD-ROM is a *transitional medium*, will not this simple fact itself induce increased instability in the already notoriously unstable world of the arts? It is true that art can thrive in such a situation, but most artists would prefer to work outside little fashion eddies propelled by the suction of commodity logic, or longer that the obsolescence planned by a short attention span of technological development. How can an artist build up a respectable body of work in a medium so labor intensive, just to have the novelty of a new interface wear off as quickly as a typist's first fascination with a scroll bar, while the technology at large is tweaked, kneaded and superseded, with huge corporate interests sporting and supporting large teams and larger budgets upping the ante on production values?

Meanwhile, computers are mobbed by adolescent males as if the mouse was a pimple-cream dispenser, and the whole scene is flanked by a smattering of art critics and journalists bent on asking *what's next?* or *so what?*

The situation facing CD-ROM artists is not as bad as it has been in recent years for virtual reality artists, who have seen their platforms disappear only months after completing a project, leaving them stranded, waiting for a future museum of old VR technologies in order to view the fruits of their labour. There has been too much invested in CD-ROM technology for it to disappear overnight and the games and education markets mean that there will be a cultural incarnation of sorts for the near future. Indeed, it looks like some future will happen. But the future of art within this scheme of things is open to question, especially the way the future feeds into now.

Of course, CD-ROM art is not the first time art and computers have joined forces, nor do they join forces each time in the same way. Instead, we can detect three major evolving

phases based upon technological competencies – synthesis, recording and interaction – and discern how each of these developments might prove conducive to certain artistic enterprises. In this respect, it is no wonder that Western art music has had the longest tenure with computers, for coming out of an immediate background of noise, electronic sounds and mechanical instruments during the first half of the century, nothing was required in the way of verisimilitude, not even imitation of traditional instruments – only the relatively undemanding task of synthesising sounds out of little bits of electricity. These were the days of room-sized computers, their huge fidgety reels fed with holes by punch cards, when a very short composition could produce a stack of reels taller than the composer, but at least a composer might end up with a sophisticated composition, because all a visual artist could look forward to was whipping spaghetti into shape. Eventually, synthesis became increasingly sophisticated and geared toward viscosity, enabling graphic artists and animators to work effectively on computers, an opportunity used to great advantage by Peter Callas and others. Then, about a decade ago, more and more artists from the world of the “visual arts” (including all the non-imagistic and non-visual forms the institution of visual arts attracts) were attracted to working on computers because of the advent of an affordable hardware and software capacity for recording, whether that was photographic, cinematic or audiophonic. It is still early in the game for the arts reliant upon recording, but it is earlier still for those utilising interaction. As such, CD-ROM art finds itself in a situation endemic to each phase of the artistic engagement with computer-based competencies, where the roles and tasks of technologists and artists are blurred.

Technologists destroy their own roles as they render technology available to a wider class of people, artists included. But prior to this point of auto-destruct the hybridised role of technologist/artist, wherever it might be on the range of a straight technologist making art or an artist giving themselves over to technological matters, is about the only role that can occur. The way this narrows down the social base from which artists are drawn is further

exacerbated when the question of access comes into play. The advent of personal computers did little at first to alleviate the problem, because it was often necessary to become a programmer, with a life-style conducive to working ungodly hours scantily remunerated, in order to defeat the signature sounds, images and procedures pre-packaged into the gear. According to the German communications theorist Friedrich Kittler, this problem will continue to exist as part of a general tension between technologist and user. The conundrum, as he sees it, is that ‘the user is more or less reduced to a domesticated animal, because it is getting impossible to cut through the user-friendly graphic surface to gain access to the systems code below’ while at the same time ‘taking the trouble to learn how to programme will, unfortunately, be rewarded with the acquisition of power, and those few who are capable of writing programs...’<sup>1</sup> As a figurative solution, Kittler hopes for a virtual reality program that will allow users to be transported in miniature to the computer circuit board in order to transform at the root the very environment in which user operates, but he doubts whether computers are capable of such self-reflexive activity.

Far away from this tiny figure, virtual soldering iron in hand, and away from the solitary site of the individual computer and user, the arts are subject to considerations of a more social type. A group of people may, after all, change their minds about the values placed upon art and technology, as occurred during 1992 at the Prix Ars Electronica, an annual festival held in Linz, Austria, where new technologies are emphasised. Speaking for the jury of the Computer Graphics section, the Czech artist and Cultural Minister Milan Knizak, once a key participant in Fluxus activities, lamented the sense of boredom engendered by the 900 entries. He expressed the view that art suffered under the domination of a technological taskmaster and that the strictures designed into the software were ranging too much influence. All he wanted was a reasonable balance between art and technology when he said

<sup>1</sup> Friedrich Kittler interviewed by Peter Weibel in *On Justifying the Hypothetical Nature of Art and the Non-identity within the Object World*, book accompanying exhibition of the same name by Peter Weibel, Galerie Tania Grunert, Cologne (June-August 1992), pages 164-177 (168, 172, 176).

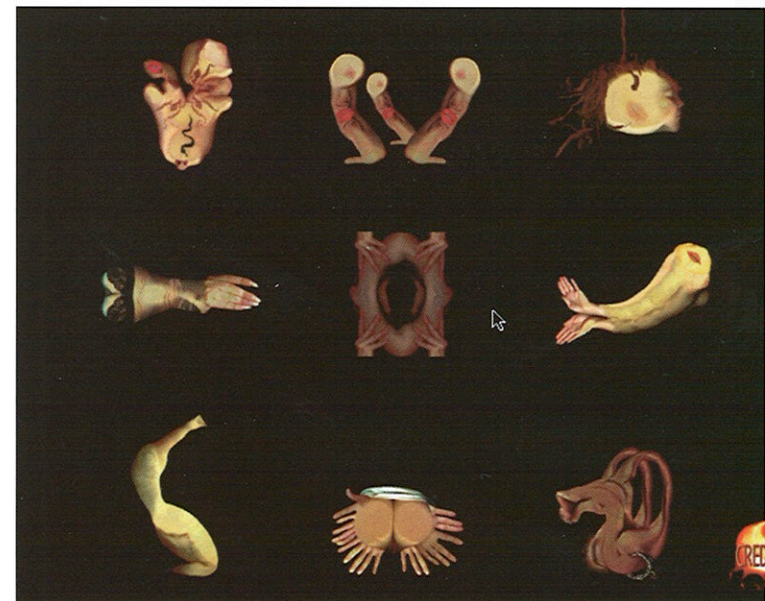


that 'the entries exude a sense of tiredness. I am referring here to a *tiredness of creativity*, since there is no doubt that the actual number of hours spent in front of the computer screen is hardly in question.<sup>12</sup> Exceptions were made for the winners of the prize, but then again, the first prize went to two scientists who had written their own program and generated the images on very expensive equipment. It is also important to note that of the prize winners, only the Austrian artist Valie Export ventured what could be called social content.

Many artists today think that CD-ROM technology is likewise still too much of a taskmaster. Their chosen response, made in order to avoid the real possibility of becoming technologically bogged down and *creatively tired*, has been to be as tactical as possible, to realise that the dance is being done in a closet and to choreograph the moves accordingly. Computers within some of the arts have been able to extend already existing capabilities, but CD-ROMs are instead a place for the coming together of many artistic forms – graphic, imagistic, animated, audio, musical, filmic, videographic, textual, literary, etc. CD-ROM art becomes an act of juggling the technical requirements of these forms while at the same time attending to the requisite crafting of affect, eros, poetics, semiosis, sociality, politics and siting (a critical practice necessitates a similar coming together). However, an artistic practice attempting to integrate a broad range of combinatory possibilities faces the problem that most of these technical forms are presently incorporated into CD-ROMs in a debased and limited way. This does negate the possibility of making art – the television screen was a postage stamp when compared to film, the film screen cold and mute when compared to the theatre stage. It just means that the art must exercise its strengths in acts of combining. Certain CD-ROMs do this exceptionally well, for example, Brad Miller's use of staggered movies in a sumptuous setting of Deleuze and Guattari's text in his *A Digital Rhizome*, or Linda Dement's unsumptuous use of animation and photomontage in *Cyberflesh Girlmonster*.

<sup>12</sup> Milan Knizak, 'That's What Used to be Called Talent,' in *Der Prix Ars Electronica* (1992), edited by Hannes Leopoldseder (Linz, Austria: Veritas-Verlag, 1992), pp. 12-15.

from  
Linda Dement  
*Cyberflesh  
Girlmonster*  
1994



CD-ROM art seems to be dependent at the minimum upon tactically locating such intersecting possibilities. Otherwise, a basic strategy lies in how a little of this can be combined with a little of that while hoping for the synergistic best – or how things might be gathered crudely together in a poetic agglomeration.

What difficulty pertains to combining debased forms is itself compounded by the slowness of the movement that one might expect within a screen and in transitions from one screen to the next, especially as the expectation for speed has been cultivated by the reflexive response to video games, not to mention lightning quick cuts in films, music videos and radio. Among the more successful tactics at present is to compensate for slow movement by using it. For instance, in the *Anti-rom* disc, Shirley Bassey's song stylings can be incrementally swept past the point of lounge-act laconism to an endless sequence of pained expressions. Is it pain produced by ecstasy or from singing the same song for the thousandth time, we

wonder, as she abruptly disappears in a one-frame flare as a studio light is caught in the facets of her ring. Another tactic is to settle back in a position of repose, as an antidote to the frenetic action adventure pace of daily life and everything else, and to respond to each instruction of the user with only a slow fade from one screen to the next, and only then among certain elements. Or speed can be ignored by presenting only a world at rest, where objects and environments are set and arrayed in a predominantly indexical way. Finally, one may keep everything very simple, not only to keep the strain off computing power, but to reduce combination to a clear case of selection. It is important to stay unpretentious without evaporating out into whimsy, and to keep the candour quotient high, a tact taken successfully by Michael Buckley in *The Swear Club*.

The relative slowness in transitions and combinations means that CD-ROMs presently run counter to a general ability, existing for about the last forty years within media-saturated societies, to comprehend complex meanings from highly diverse sources at a greatly accelerated pace. This speed should not be confused with the incredibly quick cuts possible in the 1920s, as demonstrated by Eisensteinian montage, which only operated within a visual register and was contained within the terrain of one scene or among a single class of imagery. Rather, there is another kind of speed operating as a result of media literacy, one learned socially over the cumulation of decades of redundant audio and visual input, reaching its present state with television and kid culture radio in the mid-1950s. People are now capable of perceiving Eisensteinian speed in both audio and visual registers while changing locale wildly from one shot to the next, but only certain cultural forms chose to take advantage of this new ability. On the one hand, white knuckle, shoot-'em-up games incorporate speed without a corresponding prolificacy of code, and the visuals of MTV videos may change rapidly but they almost always do so against monotonously predictable music with few change-ups. On the other, the type of postmodern pastiche found in the music of John Zorn or the films of Abigail Child are an exercise in the complex transformations and

micronarratives occurring among subtle jumpcuts, curt segues, the torque of sinewy insinuations from one nanosecond to another. Sometimes they are nothing more than indexes of the din. CD-ROMs are a few steps back from the ability to do this, yet they have the promise for an elaborate coordination of disparate elements that would outstrip present-day pastiche because they can cull from a wider array of technical possibilities. More importantly, speed is only an emblematic demonstration of the complexity with which the coordination may occur.

Matters of combination are also linked with *interactivity*, with how the user initiates, directs and interacts with the various states and procedures of the CD-ROM. But what is interactivity? CD-ROMs are basically nothing but a storage medium yet interactivity has become inseparable from any notion of their function or fate. Interactivity is understood to somehow distinguish the inactivity of other cultural forms, such as books, television and cinema, although even a primer on literary and media theory would dispel the notion that the way people read, watch or listen is passive. Similarly, the idea that physical activity in itself can transform inactivity into (inter)activity can be countered by the words of the Native American poet Paula Gunn Allen, addressing a different context, when she says: '...ceremony is enacted before people who are neither singing nor dancing, their participation is nevertheless assumed. For participation is a matter of attention and attunement and not of activity versus passivity.'<sup>3</sup> Indeed, what type of physical activity are we talking about in the first place? A few nudges of the mouse, certainly the most torpid, slothful breed of that species! Moreover, all this athleticism is occurring on a desktop too small for a decent game of table tennis, and the other player has all the moves. And if we interrogate the idea of CD-ROM interactivity on other counts it would appear equally untenable. The ideology, if not the present fact of interactivity, relies on maintaining a lack of definition, for whatever occurs

<sup>3</sup>Paula Gunn Allen, 'The Sacred Hoop: A Contemporary Indian Perspective on American Indian Literature', *Symposium of the Whole*, edited by Jerome Rothenberg and Diane Rothenberg (Berkeley: University of California, 1983) pp 173-187, (180).



today – with an ongoing development of interface design, software and hardware – is, like CD-ROMs as a whole, only transitional. This means that there is a slippage between the present state of affairs and the promise of a precariously perched future that will any day rush in with increasingly elaborate forms of experiential ubiquity, plenitude, instantaneousness, etc., and this slippage washes back upon the low-grade character of present-day interactivity to make it seem much more important than it actually is.

The importance of interactivity not only derives from the perceived inevitability of technological progress – there are also enormous social and economic pressures at work, imposing themselves on all areas of the discourses surrounding all forms of new media technology. Where else but in a culture animated by market-based liberalism could the idea be taken seriously that the user is tasting the fruits of participatory democracy by choosing among predescribed items and pathways? Only among the hollowed halls of the post-Dawkins period could the rationalistic presentation of branching options be confused with a new, exciting form of education. Likewise, only in a journalistic hype already streaked with warmed-over Baudrillard could anyone believe that the CD-ROM artist has the control to plunge the user into a relativist slipstream of a new abstraction. It is a rhetorical environment derived from the fact that the computer-based media arts as a whole are now being developed *at the same time* as the 'revolution' in the computer, communications, education and entertainment industries (versus, say, video art which arrived late within an already established environment of television). Never before have the arts been listed so high on such a mammoth industrial agenda, or found themselves so seduced and exploited by corporate and government initiatives. Did the Australian Government ever promote computer music to the tune that the *Creative Nation* document promotes CD-ROMs? Prior to a few years ago, only a spider gazing upon chicken wire knew what was meant by the *arts industry*.

If we take a few steps back from all the noise being generated around a few clicks of the mouse, then it is obvious that present-day interactivity is nothing if not modest. It is true, as

from  
Bill Seaman  
*The Exquisite  
Mechanism of  
Shivers* 1994



anyone who has sat in front of CD-ROM art knows, that much pleasure can be derived in simply discovering how things work. It is also true that any fascination with these devices quickly fades with familiarity. Yet a tension exists between an imperative to develop the interface in such a way that it becomes *transparent*, a goal with which high budget CD-ROM titles increasingly pride themselves on reaching and the desire to foreground interactive devices in order to maintain an auto-reflective criticality or candour, typical in many of the arts, to counter the oppressive techniques that may be hiding within transparency. The trick becomes how an artist might develop a device that neither disappears into transparency nor into familiarity. In general, however, it would seem to be wise at this time to tone down the importance given to interfaces and to shift priority (in ascending order) to how the interface might be integrated with the other features of the artwork, and what those other features are. One tactic used by CD-ROM artists to fatten up the facade of the interface has been to equip it with an engine of sorts that deflects predictability by employing chance, or generates endless combinations of texts, images and sounds, as in Bill Seaman's *The Exquisite Mechanism of Shivers*, a modern day version of the 17th-century combinatorial verse of Juan Caramuel or a techno-version of Raymond Queneau's *Cent mille milliards de poèmes* (1961).<sup>4</sup> Otherwise, there is a great deal to be learned from the devices relevant to interactivity already explored by certain difficult literatures such as the involuting novels of Alain Robbe-Grillet, experimental films such as Chris Marker's *La Jetée*, or a variety of approaches within the avant-garde and experimental arts to participation and task orientation, to the workings of liminality, or an incorporation of games and game structures, in order to integrate ideas with the interface.

The rest lies in the promise of CD-ROMs as a *transitional* medium. But does the

<sup>4</sup>See Fernand Hallyn, 'A Light-Weight Artifice: Experimental Poetry in the 17th Century' in *Substance* 71/72 (1993), pp. 289-305, and the Queneau website, in French and English.

transitional necessarily transport us to a predetermined locale? Will CD-ROMs soon embody lightning-quick techniques of combination, move on-line to a cornucopia of links, or traffic in *immersive* capacities of full verisimilitude or a truly Olympian, meta-immersive solipsism? Is not hope the leash of submission? Will the continually transitional character of the medium, like certain types of afterlife and postmodernist arguments, simply discourage committing oneself to the present; will the accelerated coordination of all sensory faculties induce a new neurasthenia and produce better soldiers; will lazy browsing of CD-ROMs succumb to the meters of a fully commercialised Internet; will market-based illiberalism more fervently celebrate anti-democratic futures; will the demographics not change; will increased capabilities for interactivity mean dredging up those social skills lost during endless hours in front of a computer; and will a new species of interaction keep humans busier with each other and better entertained as other species die off, indestructible discs flaring in the toxic sun? If so much confidence is given to being transported into the future on the back of an ineluctable technological progress, shouldn't there be promises made as well about ethical, political, cultural or artistic developments? If not then what can be made of any promise but what we have now?

Douglas Kahn is Associate Professor of Media Arts at the University of Technology, Sydney. He wrote *John Heartfield: Art and Mass Media* (Tanam Press, 1985), co-edited *Wireless Imagination: Sound, Radio and the Avant-garde* (MIT Press, 1992) and is currently completing a doctoral dissertation in Art History at the University of Western Sydney-Nepean entitled *Noise, Water, Virus*. His essays have appeared in *October*, *Public*, *Performing Arts Journal*, *The Drama Review*, *Musicworks*, *InterCommunications*, *Photofile*, *Midwest* and *Essays in Sound*, and in the books *In the Spirit of Fluxus*, *Critical Issues in Electronic Media*, *Sound by Artists*, *Radio Rethink*, and *Christian Marclay*. He writes regularly for *The Sydney Review* and is International Editor for *Leonardo Music Journal*.

## CD-ROM: the 21st-century bronze?

Mike Leggett

The model worlds developed by the artists represented in *Burning the Interface* illuminate the significant difference between the image from a computer and the image from a videotape – the computer providing non-linear options for guiding or navigating the order and duration of events. The interaction in many of the selected works is cathedral-like in its 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). In Graham Ellard and Stephen Johnstone's *Passagen*, the subterranean arcades of the modern city replace the medieval model; George Legrady's *Anecdoted Archive from the Cold War* adopts its ground plan from an obsolete State Museum, the church of the centralised economy. Brad Miller's *A Digital Rhizome* develops elaborately rendered 'virtual' architectures; Philip George and Ralph Wayment's *Mnemonic Notations* creates a two-dimensional space as complex as the paths of a tantric painting; and in *Anti-rom* by the group SASS, the extensive dimensions of the whole are never revealed to the viewer. In David Blair's *Waxweb*, images, texts and movies have multiple and complex interconnections.<sup>1</sup>

### 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 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 visual artists skilled in the use of tools combining with the computer scientists' ability to *develop* potential tools.

For more experimental work artists have customised computer hardware and software to

<sup>1</sup> For further discussion on this work by the author see *Photofile* no 45, 1995. The VRML version (3D 'virtual' animation) is to 'go live' during the exhibition and proposes limitless narrative dimensions.

the requirements of artforms such as installation and performance, where the configuration is unique for each occasion. This of course makes the work fresh and new – but also ephemeral. Such work is not tradeable in the conventional sense. It requires public or private patronage, or another source of income. Or if the ephemeral is promoted as a virtue, the artist needs to develop a tolerance for poverty.

At complex levels of data management (another way of saying multimedia) it is not only the time invested by the artist that needs to be taken account of but also the patience of the audience. 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 brings the lot crashing down.

To prevent a computer 'crash' requires well-designed software running smoothly from the memory store. The CD-ROM has more stable attributes than the memory storage devices normally linked to a computer's processor, such as floppy discs, hard discs, cartridges or digital audio tape (DAT), which are based on magnetic media and so subject to both electro-magnetic and physical interference. In brief, CD-ROM has offered a convenient reliable and consistent computer storage format.

During 1993, various manufacturers marketed desktop CD burners capable of making an individual CD-ROM, a desktop technology initially intended for the archiving of company accounts and records. Besides attracting commerce, however, the technology attracted the attention of artists. The advent of this medium of storage could be said to mirror the impact of the arrival in the fifth century BC of bronze casting on the development of Greek sculpture. Both technologies provide plasticity and permanence.

#### **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 ephemeral and fugitive nature of much computer-based work has restricted 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 'casting' a copy. 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.

#### **Independent production**

During the early development of the personal computer in the 1970s and 1980s, competing companies produced huge 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 the 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 quite common for any single CD-ROM to be readable on both major but incompatible systems – Macintosh and Windows. Now 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.

Alongside the marketing of computers for the consumption of CD-ROM, the computer industry has developed software tools for production designed for specialist users rather than programmers – thus offering artists independence from commercial production companies. Nevertheless, the number of craft skills required of an individual to make a CD-ROM are considerable and include those of a 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 these limitations or go out and raise funds to pay for the expertise required.

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 working disc 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, or multimedia computer, is the standard computer of 1996, 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 – as a universal enfranchiser.

During 1995 the number 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 its current stage of technical development. 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, sound, graphics, etc.) is able to fully function.

## BURNING THE INTERFACE

The works in this exhibition approach interface design and interaction with the 'audience' or 'user' or 'interactor' in different ways.

### Interface

The interface is the conventional and pragmatic shorthand description that most users have inherited from computer scientists and the computer trade to describe the organisation of the screen, keyboard and mouse that enables the user to control the functioning of the computer, this functioning described most simply as Input/Output, or I/O to use the jargon. The 'interface' services the basic computer function: -input-process-output-. 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), which conceals the code by substituting images and icons. 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.

The interface paradigm is central to the explorations of artists represented in this exhibition. In a paper *'Down the photostope 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

# I/O

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."<sup>2</sup>

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 interactive interface includes a physical link between the viewer and the artwork – the Mouse – making response *necessary* rather than optional.

Many works in the exhibition explore the potential of this interface, by navigating 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 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.

<sup>2</sup> From a paper presented at The Film-maker and Multimedia Conference, (AFC) Melbourne, March 1995

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. Most works in the exhibition require quite attentive interaction but the actual method of progressing through a piece is different in each one. It could be by simply clicking on the image of a labelled button that one is led on to further options. Less obvious opportunities for interaction need to be determined by trial and error – very often without recourse to rational deduction!

A *Digital Rhizome* by Brad Miller has been seen extensively around the world in the last twelve months. It was the first interactive computer piece I encountered eighteen months ago 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, and use the mouse click *intensively* – on *buttons*, labelled or unlabelled, and *zones*, concealed or indicated with an image. By contrast the anti-button attitude struck by Gerald van der Kaap's *BlindRom* and the British work by the SASS group, *Anti-rom*, entertainingly explore a-thousand-and-one things to do with a Mouse *except* click it.

The printed book is one interactive model used frequently in popular retail CD-ROM titles. The interacting subject, by definition, is in the same kind of close proximity to a work as the reader of a book. 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 this model. John Colette commences with three options for exploring the collected data on his disc *30 Words for the City*: 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 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.

Similar processes of interaction and immersion, which function together to produce electronic catalogues of discrete 'movies', occur in works such as *Scrutiny in the Great Round* by Jim Gasperini, *Die Veteranen* by a group of Leipzig artists, and Peter de Lorenzo's *Reflections, Abstractions and Memory Structures* – which goes to the 'extreme' of using interaction to simply start-stop-start the entirely linear image progression.

The question of motivation remains – why should I want to interact? The established protocols of screen culture are questioned to greater and lesser degree by work on CD-ROM. The promise of more to see (the scopophilic drive), and more to follow (the narrative drive) both propel the interacting navigator forward. Or, like multi-channel television, they may simply encourage the easy option of finding something else.....

#### NAVIGATING LEVELS OF MEANING

The title screen for a work in this exhibition 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: that 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 necessarily having 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 aleatory – 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 interactive construction 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?

An initial encounter with *A Digital Rhizome*, for example, suggests that the basic element in this work is the moving image. Most of the movies refer to technology, particularly the technology of war – the innate eye of the hunter is thus appropriately served. The viewer 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 interact with this work – for example to 'choose' to steer again the route which will rerun the image of Iraqi squaddies running from their vehicles as a missile homes in – make the events it pictures more meaningful than their appearance on TV? Or give them a wider context? Does the juxtaposition with original images created by the artist establish a dialectic space to enable us to see a way through such terror?

During the process which I outline above there is an option of interacting with 'one-dimensional' images grabbed from media-space. Whilst interactive CD-ROMs may confront us with what appear to be overdetermined images, the interactive process can enable us to comprehend the narrative process to which the media often subjects us. We know that constant

from 3D-World  
magazine, 12  
September 1994

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.

Linda Dement's *Cyberflesh Girlmonster* subverts the conventional model of the fragmented female body by assembling body parts to make new images that are both humorous and horrific – overlapping sounds and texts underpin accounts of brutal social realities. Repulsion and fascination are successfully interrogated through the process of interaction.

Celebration of the intimacy of the interacting process is enacted in *Flora Pentrisularis* by Jean-Louis Boissier (after Jean-Jacques Rousseau), where the smallest of physical movements or a click of the Mouse is reflected by movement on the screen. This gentle and sensuous correspondence, requiring the responding gesture, places the interacting subject clearly in the frame of the screen.

#### 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.<sup>3</sup> 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.

Engaging the audience in a productive relationship is the Interface we are currently seeking to imagine and create. Such a project of engagement, an ontology of the everyday, is something that fascinated Walter Benjamin. I was struck on re-reading Hannah Arendt's introduction to *Illuminations* by her paragraph describing Benjamin's essay *Passagenarbeit* (*The Arcades*). The contemporary arcades accessible through our personal computers, which

<sup>3</sup> Derrick de Kerkhove *The Skin of Culture: Investigating the New Electronic Reality*. Somerville House Publishing, Toronto 1995.

artists using CD-  
to the look-out for  
artists working  
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at 12  
work (phone de  
KOE Exhibition  
02) 252-0361, or



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define the potential of the Interface in so many ways, seemed to be being described:

'And just as one inhabits an apartment, and makes it comfortable, by living in it instead of just using it for sleeping, eating and working, so one inhabits a city by strolling through it without aim or purpose, with one's stay secured by the countless cafes which line the streets and past which the life of the city, the flow of pedestrians, moves along. .... What all other cities seem to permit only reluctantly to the dregs of society – strolling, idling, flânerie – 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.'<sup>4</sup>

If Paris was Paradise, is the modern paradise the Web? 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.

<sup>4</sup>Walter Benjamin *Illuminations*; edited with an Introduction by Hannah Arendt, Jonathan Cape 1970

Mike Leggett has been working across the institutions of art, film and television since the mid-1960s. He has film and video work in archives and collections in Europe, Australia, North and South America. Currently he is completing a Masters of Fine Art at the University of New South Wales College of Fine Arts, and practices professionally as an artist, director, producer, editor, photographer, writer, teacher and computer consultant.

## Artist Pages

Names of artists or artist groups are listed in alphabetical order. Each artist or group page includes a statement about the exhibited work and the circumstances of its production, followed by an artist or group biography.

## MAGAZINE PAGES

Entries on three magazines: *Artifice*, *artintact* and *Mediamatic*, follow the artist pages.

## INDEX OF NAMES AND TITLES

Many of the exhibited CD-ROMs are the result of collaborative or team work. The names of the primary collaborators, as well as the artists and CD-ROM titles, are listed in the index on page 108.



**WAXWEB 2.0**

United States, 1991-1996 (continuing project)

DAVID BLAIR

MosaicMOO software: Tom Meyer

User interface and graphics: Suzanne Hader

Digitising stills and video: Anna Youseffi

Indexing and text management: Melynda Barnhart

I prefer to describe my work as image-processed narrative, in which both the images and the narrative are processed. On the image side, this puts me very much on the side of video makers who insist upon a mediated image, and for whom the process of technique is always foregrounded in the artwork.

**David Blair**

*Waxweb* is a network-delivered hypermedia project, based on my electronic film *WAX* or *the discovery of television among the bees* (1991, 85mins), combining the largest hypermedia narrative document on the Internet with an interface that allows Mosaic or MOO users to make immediate, publicly visible hypermedia additions to that document. What we mean by hypermedia: hypertext, pictures, audio, video and virtual reality, all mixed up.

What's a MOO? Essentially, MOOs are tools for computer-supported collaborative works (and play, etc.) which allow real-time intercommunication – they are text-based virtual realities. Using a forms-based interface, users have the ability to make links from any word to any other word, add comments to any page, and also to create their own pages.

**Circumstances of production**

This project has been made possible by networked associate fellow status generously extended to the members of the Waxweb project by IATH, the Institute for Advance Technology in the Humanities at the University of Virginia, headed by John Unsworth. A detailed account of some of the processes and thinking that led to the establishment of this site, is narrated in the *Mosaic MOO* paper by David Blair. The hypertext for this project was authored on the Storyspace software from Eastgate Systems. Waxweb opened to the Internet on 24 July 1994, coincident with the opening of the Edge at the ACM Siggraph 94 convention in Orlando, Florida.

**Artist biography**

A major reason for my choice of working method is that video imaging is something that I



discovered and learned on my own; unlike many of my peers, I do not have an art school education. I actually began at the public library, where my desire to make plastic-image work was fatally informed by the discovery of works like Ed Emshwiller's *Sunstone* and Nam June Paik's *Suite 212*.

I studied fiction as an undergraduate in college, where I made the uninformed decision to become a director of narrative films. My models since high school had been 'grotesque' fictions. My earliest instructors were the Firesign Theater, an audio-theatre group that distributed their fictions by LP, and Thomas Pynchon, whose book *Gravity's Rainbow* I had the good fortune to accidentally buy when it came first appeared.



**FLORA PETRINSULARIS** (*artintact 1*, ZKM Karlsruhe)

France/Germany/Switzerland, April 1993

JEAN-LOUIS BOISSIER

*Historical and literary research: Liliane Terrier*

This collection is like a diary of my expedition, which makes me

**Jean-Louis Boissier**

set out again with  
renewed joy, or like an

optical device which places them once again before my eyes.

*Jean-Jacques Rousseau Reveries of the solitary walker*

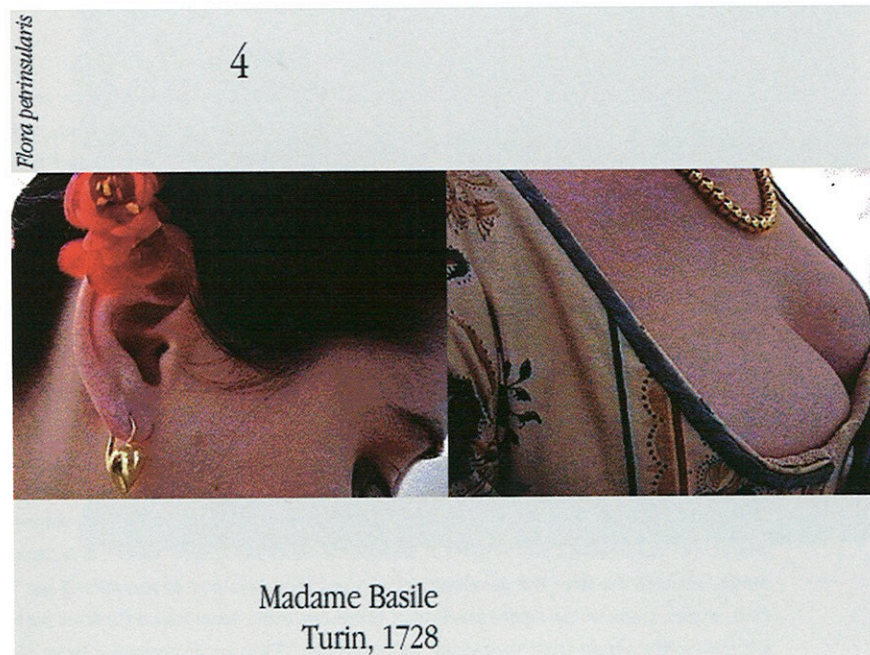
*Flora Petrinsularis* is composed of two parts – sixteen quotations from *Les Confessions* by Jean-Jacques Rousseau, and a collection of sixteen flowers gathered from the same places where Rousseau practised botany.

The virtual book contains interactive sequences of images and sounds with variable rhythms and movements. For each quotation, there is a video illustration that focuses on a character, in a moment of outburst, from a short love scene selected from *The Confessions*. For each flower, a sequence of images conveys its gathering from a natural setting to its metamorphosis into a still image.

This CD-ROM – based on a literary masterpiece which is always open to fresh interpretation – underlines the passage between traditional and future forms of books or movies. The interactive setting tries to make an interpretation of *The Confessions* that refers only to the text itself, to its secret or revealed motivations as an exemplary self-analysis.

**Artist biography**

Born in 1945, Jean-Louis Boissier teaches art at Université Paris 8. As teacher, researcher, curator and artist he has been concerned with aesthetic changes occurring with images and the arts in connection with interactivity and virtuality. Boissier has exhibited interactive works in the Venice Biennale (1986); *Passages de l'image* and *Revue virtuelle*, Centre Pompidou, Paris (1992); *Ars Electronica*, Linz (1992) and in *Multimediale 3*, ZKM Karlsruhe (1993). His solo exhibitions include those at CREDAC, Ivry, Paris, and NTT/ICC Gallery, Tokyo, both in



1995. His curatorial projects include *Revue virtuelle*, Centre Pompidou (1992-1994), *Artifices 1 & 2*, Saint-Denis (1990/1992) and *Machines à communiquer*, Cité des sciences, Paris (1991-1992).