Electronic Space and Public Space: museums, galleries and digital media

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Introduction

The work of contemporary artists working with 'new media', or, more accurately, developing media technologies, is having a considerable impact upon established galleries and museums, the traditional sites for encountering visual art and artists. Photography and video, and, more recently, computer mediated work and telematic networks, extend demands on the resources required by these institutions to act as both an archive and a forum, as well as challenge traditional notions of culture and heritage.

As an archive, the international museums' functions of collecting, cataloguing and conserving media art are being responded to, with few exceptions, in ways which are wholly lacking in foresight, enthusiasm and imagination. As a public forum, again with few exceptions, museums and galleries are continuing to regard the audience as a localized, homogeneous group of cultural consumers. They seem unable to provide a space in which interactions of all kinds can occur between the media artist, the artist's work, the interlocutor of the nexus of the interaction (the curator, the critic, the essayist, etc.), and the individual visitor. Interaction, the crux of so much twentieth-century century art, opposes the somewhat ecclesiastical approach of the lecture and the guest spot. However, interaction is only manifest in these spaces through the happenstance of certain media art 'pieces'.[1]

Points of convergence as well as dissonance within the visual arts will be examined within the following taxonomies:

- the points at which media art and media artists enter the public sphere
- knowledge delivery, as distinct from knowledge development
- the emergence of work into exhibition spaces closely associated with the production studio, and other places and points where visibilities might be 'hidden in plain sight'.[2]

Exhibiting, as administered by the larger institutions, curatorial practice and the options available for the presentation of work, is also examined in addition to reflections upon the experience of interface and immersion within interactive multimedia that raises the question—why should I want to interact?[3]

Interactions

Interaction, as opposed to reflection, is at odds with the 'real' world, or what could be called most certainly, the non-virtual world. Within most public spaces, including

between the walls of most galleries and museums, the passive regard or reflection upon an artwork is accepted as a sign of respect for the integrity of its maker and the aura of the object itself. The pursuit through more active means by the viewer of the personal prerogative within a work is somehow regarded as an aggressive form of self-seeking, questioning traditions of authorship and challenging the inviolability of inherited artefacts. While society accepts experience as it is mediated by corporations, governments and professionals that propagate viewpoints which entertain, 'provide answers' to the existential continuum, or simply provide distraction from all of that, the visibility, amplification and accessibility of the mediating process is absent. There is little space created for even a reflexive response, let alone the possibility for interaction.

For many who encounter art casually, visitors to museums and galleries, reflection is often assumed to be the response of the art viewer, reposing before the 'mirror of the soul'. Confronted with much of the art produced during this century, however, the response required by the artist from the audience has more often been the reflexive— what the historian and commentator Simon Schama has observed as being ' ... the increasingly precious and reflexive variations on the venerable modernist theme of the uncoupling of painterly process and its ostensible objects, the endless pirouettes around the holy of holies: representation theory' (Schama, 1996, p. 124).

The reflexive, of course, does not lead to the theoretical domain but acknowledges and allows discourse beyond that of the interpretive, the subjective and the wholly speculative. In the context of electronic media it could be suggested that a succession of reflexes is what is now called interaction. Much recent multimedia work by artists explores this potential, essentially by navigating through the various 'screen spaces' that make up the virtual whole and demanding of the public in a museum (as distinct from clientele visiting a gallery and intent upon a shrewd investment), an involvement, *a priori*, in the act of making the work, as well as making meaning.

Professor Roy Ascott once wrote that ours is 'an art which is emergent from a multiplicity of interactions in electronic spaces'. There is a certain irony in quoting Ascott, the champion of 'telematic culture', or art on the wire (*Homo telematicus*) and the 'connectivist manifesto', in relation to the concrete spaces of public galleries and museums. A multiplicity of interactions in electronic space can of course be encountered in the three-dimensional space of a public gallery as well as the private space of '*computus domesticus*'. Indeed, the actual presence of people, along with the virtual presence of those on-line, could constitute a chance for divergent forms from within the emergence that Ascott proposes and which, since the time he made the statement, are emerging at an exponential rate and challenging the exhibiting institutions to reflect upon their role.

Trevor Smith, Curator of Contemporary Art at the Art Gallery of Western Australia, has observed that there is a gap between art of the past, audience expectations and artists' production and process: 'Many galleries in Australia continue to treat photography, let alone video, or today's version of new media, with a great deal of suspicion, in part because of this recognition gap' (Smith, 1998). Furthermore, media arts imply that the galleries and museums would need to change the paradigms and priorities within which they work:

> It has become increasingly obvious to me that especially when younger people are in the gallery, the video and photography for example, captures their imagination in a very different way to the traditional media. Now this does not mean that painting has ceased to be a significant arena for production, it is

simply that as Arthur Danto has recently put it: 'Painting is no longer the engine of art history' (Smith, 1998).

Responses to new media art forms located within the traditional gallery space can, though, be encouraging. Noel Frankham, recently the director of the Centre for Contemporary Craft in Sydney, reported that he had spent one and a half hours with a touring social history exhibition, *Home of the Brave*, a computer system operating audio zones within the gallery. 'As I walked through the exhibition an "audio guide" that only I could hear was activated. The individual control that the headset provided, without buttons or knobs, encouraged a level of empathy between me, the curators and the objects that I'd never experienced before, making the exhibition most moving, rewarding and memorable.'

Institutional forms need to be developed so that the widest possible multiplicity of interactions can occur in electronic space in the most public way, so that others, particularly tax-payers and sponsors, can gain access to, and information about, art in gallery and museum spaces. By extending the institution's function to a *dynamic* (non-ecclesiastical), educational role, the tendency which divides the information rich from the experiential poor would be ameliorated. It would also accelerate the movement away from an attitude revealed in this quote from an opionated young fogey Sydney-based arts commentator who asserted: 'Peering at a monitor is an impoverished aesthetic experience' (*Sydney Morning Herald*, May 1996).

Curations

Curators are often described as gatekeepers, with the implication that they are responsible for allowing certain artists through the gate whilst excluding others. But this is only part of the selection process that occurs. Preparing the exhibition *Burning the Interface < International Artists' CD-ROM* for the Museum of Contemporary Art in Sydney between 1994 and 1996 was illustrative of these processes. It was a good example of how, I subsequently realized, there are often several selection processes going on as part of the team enterprise involved in developing a significantly resourced exhibition for a significant national museum. In a sense, the curator passes backwards and forwards through the gate many times, leaving many bookmarks on either side. There are the marks placed on a whole range of artworks, the different art worlds who will encounter the work, and the various ways in which the work could be presented or installed and introduced to these different art worlds.

These are worlds which are many, varied and encompass a range of social spaces that may seem at odds with the project that is contemporary art. As the responsibility for resourcing the making of art shakes and shifts between the beneficence of patrons, the mammon of the state, the paying audience and the stingy collector, more recent notions of sponsorship by commerce shuffles into line. The corporate sponsor, cutting costs to the bone to obtain maximum leverage in the stock market listings, is introduced by the government to its 'social responsibilities'. The latest player in shaping what a nation's culture and art worlds should contain, besides consumer goods and vaporous services, like the others, seeks some positive returns.

For the artist or curator seeking engagement outside the immediate coterie, the art world's list is lengthening. We can identify the art world of the museum or 'arts professionals' of directors, registrars, curators, administrators, conservators; the art world of the schools and tertiary courses; the art world of the ever 'nascent' multimedia

industry, which, whilst steadfastly resisting the ideas and issues that artists wish to raise, cannot resist the possibility that some upstart has actually pointed the way to the next 'killer app';[4] the world of art as understood by the computer hardware and audio-visual industries; the world of art as imagined by the artist, who often regards the whole process of mounting an exhibition as 'a piece of cake'; the art world as fantasized by the media and its commentators; the art world of the politicians and policy advisers.

The accumulation of marks against these various art worlds—and there are more—created whole nebulae of negotiations for the *Burning the Interface* development team. The outcome of these multifarious social negotiations and the many bookmarks created, were the conditions which gave the exhibition both its form and its content. Like most exhibitions, these conditions involved existential social collisions which occurred during the project's existence, rather than in some way representing a purity of artistic expression.

This was multi-functional gatekeeping, an unusual range of responsibilities but not uncommon these days I suggest, when social infrastructure, the stuff we call 'a culture', is subordinated to social efficiency, as expressed by the bottom line of the current account. The dissemination of multimedia art into public spaces, including museums and galleries, is a responsibility that cannot be taken solely by institutions and curators. It is a broader social responsibility that value-adds the social infrastructure in the areas of knowledge development, knowledge delivery and knowledge effect.

Knowledges

Knowledge development in this context is creating the conditions for artists and other knowledge workers to 'value-add' the 'ideas stream' as distinct from the 'money stream'. The task that must also be value-added is the means by which outcomes from the ideas stream are applicable to knowledge delivery. Clearly, outcomes from artists cannot be guaranteed, but the majority of work emerging from the studios can be delivered to an appropriate audience. Some work can even be placed in the public setting, and would then address in some way each of the art world audiences described earlier.

The development of strategies to locate and engage new and established audiences is an ongoing activity of the ideas stream, and is often the subject of major symposia, such as the annual *International Symposium for Electronic Art*. These symposia bring together different perspectives on the same problem and are vital to guiding the knowledge in this area. Annick Bureaud, for instance, is President of Art Science Technology Network Inc. (ASTN) which publishes *FineArt Forum*, and editor of the International Directory of Electronic Arts (IDEA). Bureaud had undertaken a consultancy for the French Ministry of Culture about the future for museums and their object-based structures, their architecture and the intellectual patterns of the staff. Of interest to Bureaud is the issue of 'cultural worth' in relation to the space available for creation, the narrativization effect of art historical traditions. Curatorial practices of themes and surveys need to give account to the flexibility of forms that electronic media produced, which in itself raises problems of conservation for museum culture. Flexibility is the key for the future, possibly along the lines of the theatre. The Ars Electronica Centre (opened in 1997) could become a model for such an approach.

My own work *on Burning the Interface < International Artists CD-ROM >* (1996) began in 1993. The many preparatory and logistical stages through which the project moved from inception to realization[5] is a factor in exhibition practice which, like the

making of art, is often invisible and unknown to the audience. The many 'bookmarks' placed during the curation process were parallel with the generation of sponsorship and public relations activities that enabled the exhibition to be erected and an audience delivered through the doors.

Each part of the process had a bearing not only on the work selected but also on the way it was presented. An exhibition of work on CD-ROM, for instance, is not just a matter of loading the discs on to the computers. Though most artists had intended for the work to be seen by one or two people sitting half a metre from the monitor screen and a mouse with which to guide the work, some artists had used the CD-ROM simply as a storage device. This required, quite reasonably, the work to be encountered within a specially constructed installation involving data projector and sound system.

All the work in *Burning the Interface* employed sound, as do most multimedia works. It was the critical element that most determined the show's design appearance and function and hence the setting in which the work was received. The exhibition manager, Louise Pether, and the designer, Colin Rowan, approached the use of the galleries with design elements that would deliver the best possible sound quality, without carry-over to nearby interactive stations. A T-shaped plinth was designed to contain within its base the computer processor box and keyboard, the monitor and mouse being placed on the top surface. Sound came through a grille in this surface and radiated upwards towards an acoustic panel that hung from the ceiling, two metres above the plinth. In the acoustically hostile space of white cube galleries, together with careful setting of sound levels and judicious use of headphones, this sound delivery system protected the artists' intentions, the bottom line for the exhibition.

A non-intrusive approach to providing explanatory material was felt to be critical to visitors' engagement with the exhibits and ability to understand a little about the genesis of the work. The walls of the white cubes were used to display, at intersections, technical and factual explanation and guidance, short interpretations of computer-screen icons employed in interactive work, and the appearance of the actual discs and accompanying packaging. 'Tip-sheets' at each interactive station provided assistance with navigation and copies of the catalogues gave access to artists' statements and three essays related to the exhibition.

This dynamic approach to contextualizing the exhibition was complemented by the education department of the museum organizing talks by artists whose work was in the show, together with writers, teachers and other commentators. Various groups from education, industry and government made formal visits which, clearly for many, was not only their first encounter with media art but also their first chance to see what 'interactive multimedia' and the 'information superhighway' amounted to, given the intense media coverage devoted to the subject since the publication of the 'Creative Nation' statement eighteen months previously.[6]

This 'major event ... the first international exhibition of digital works of art on cd-rom'[7] was an initial attempt to describe, with some passion, the contained explosion that had occurred between 1992 and 1995 amongst artists in the countries advanced with information technology. It was also an attempt to re-utilize the tools being developed by the software industry and re-purpose a hardware tool, the CD-ROM burner, to distribute the outcome of their labours.[8]

The creative utilization of information technology in the workplace, the home and the games arcade, was the broader context in which the event was received, and the range of uses to which the technology was put by artists. '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' (Leggett and Michael, 1996, pp. 8–9).

Two of the computers in the show were connected to the World Wide Web, and enabled some comparisons to be made between the off-line work in the galleries, and the early potential of more ephemeral on-line experiments. The relative ease of exhibiting on the Web, indeed of moving the studio and its processes into an on-line space, seemed to be the nirvana that many contemporary artists were seeking. For some, the whole process of submitting to the curatorial process, the often continuing demands from the exhibiting institution where work was requested, and the perceived over-determined responses by out-of-touch critics was gladly given away in exchange for the Web, the 'newest medium'. Liberté du parole!

Media Formats

The nature of the technology being utilized by artists is one which is itself in a constant state of flux—each month there is another software release or new piece of hardware which is capable of revealing a whole new vista of possibilities (of which, for instance, the Apple Quicktime series of movie playback software has been quite fundamental to the development of artists' multimedia). Technical developments in hardware and software enable an artist to make a work that, whilst directly exploiting the features a new tool provides, can also manage to create a cogent and useful artwork. Even with media formats that have been around for a few years, such as CD-ROM, some work is actually characterized, if not constrained, by the particularities of the medium.

The media formats that facilitate a 'multiplicity of interactions in electronic spaces' can be outlined and are critical factors in the work that emerges. CD-ROM is the medium that enables artists to conveniently transport their work from the production computer to another computer for an audience to experience. Whilst all modern computers have the capability to play CD-ROM, the complex and inferior Windows platform used by 90 per cent of computers is not the production choice of the majority of artists.[9] Together with public inertia towards this new and expensive means of leisure time activity, except among those professionally engaged in the field, enthusiasm for this most recent art medium remains restricted. The 'first batch' of artists' CD-ROM titles appeared in 1994/1995, immediately prior to *Burning the Interface*. A second appeared during 1998/1999, some of which incorporate another medium, the World Wide Web.

The World Wide Web is the graphical browser part of the Internet and as such is the 'instant' gallery that so many artists have dreamed of for so long. Though the rent for the space is low, finding an audience is another matter. A major advantage, though, is that the Web can function as a kind of permanent 'work in progress' site, where sketches and components are exhibited or trialled interactively before they are placed into a larger or more complex work delivered via CD-ROM. The technical capacity of the Web to carry multimedia is strictly limited and as such the Web is invaluable to curators for monitoring the development of new work as well as researching work that has already been exhibited. So-called 'virtual reality', or interactive, inclusive three-dimensional real-time rendering (including Virtual Reality Markup Language and Web 3D), is a technology being excitingly explored by many artists.

On-line exhibitions are more formally organized Web sites, with high-quality and fast technology supporting them, and a strategy in place for bringing the exhibition to the attention of an audience—the Web is a very big and lonely place! Besides being properly

funded with budgets similar to those in the corporate sector, works can be linked to key sites to help funnel an audience towards the exhibition. The work produced is often by artists in the middle of their careers, who are already being written about and discussed.

The Walker Art Centre 'SHOCK + ' listserv forum[10] has been an energetic approach to combining an object in a gallery with an object on a Web site. Utilizing the listserv forum enables visitors to critique the exhibition across the range of interests present. Responses may be offered to the curatorial initiative, or indeed to the works themselves, or to the tangential issues that the exhibition might ignite amongst the participating audience. As Kevin Murray has observed: 'Criticism native to the Web is proceeding as we speak. Your inbox is now filling up with email from various lists announcing new sites and appending theoretical expositions. Anyone can participate and any subject is permissible' (Murray, 1998–1999, p. 18).

Installation work incorporates digital technology, often seamlessly, into the full range of contemporary activity. The utilization of advanced programming as a means of computer-mediated control of electro-mechanical constructions within the field of robotics and sculpture has impacted upon the contemporary scene over the last ten years. Less sophisticated use of the technology has at least enabled artists to move away from the dreary sight of the furniture of video monitors and instead have access to the more flexible data projector and the dynamic sizes and shapes of image it can produce.

Game and arcade consuls often make appearances in exhibitions in the same way as a film or television programme may be referenced for the specific cultural message they carry. There have not been many survey shows of this cultural phenomenon, which is strange given the ubiquity of the form and the dynamics of its specific aesthetic, which demands the compression of vast amounts of specially designed and adapted sound and picture data into very small memory storage spaces.

Two-dimensional works on paper, vinyl and most other surfaces, generated from a huge range of output devices including dye-sublimation, ink jet, plotter, laser, etc., are capable of imitating the physical appearance of accepted heritage items such as drawings, prints and photographs. However, they can also be utilized to produce massive-sized images capable of covering an office tower. Three-dimensional object making, using processes that convert the virtual object on the computer monitor into an exact replica in resin, is an advanced outcome of using the computer to develop sculptural concepts. The use of CAD-CAM (computer-aided design-computer-aided manufacture) has enabled some artists to dispense with the workshop entirely and instead supply plans to fabricators.

Performance art has developed new approaches to new work using motion-detecting technologies and options whereby the audience can provide input to movement or text-based performance work. Camera and touchpad sensors extend physical presence and remote sensing through the use of ISDN and Internet connections, creating a spatial zone of presence and representation.

Practices

What is the range of 'new media' practice being developed at the moment by practitioners? How might the outcomes move from the specialist exhibition venues to enter larger public spaces and interface with a wider audience? The categories reflect the critical development of specific technologies within the broad category misnomer of 'new media', currently being so eagerly explored by both new and established artists. The connections between the development of the technology by computer specialists,

their interaction and non-interaction with artists from various backgrounds, and the adaptation of tools by various artists to achieve various outcomes, are therefore only briefly inferred.

It is important to briefly survey studio practice around broad categories (there is considerable overlap and hybridization). From this survey we can begin to identify the range that needs to be presented to the audience, and also aid in the planning of resources and the ability to select and exhibit to the various audiences described earlier. The area is clearly too large now to usefully provide examples of individual artists.

Artificial Life is a very vigorous area of current research by artists with advanced skills in software programming, with access to enhanced resources and facilities capable of creating real-time rendered three-dimensional animation. Working in the computer game technology area, artists eschew the archetypal and paranoid obsessive narratives and instead mimic carbon-based life-forms none the less unrestrained in their nature of behaviours. These often provide access points to guide the growth of entities within their digital domains and even provide out-of-body immersive experiences.

Cyborgs, avatars and agents are the simulacra of another vigorous area, the non-gendered, the prostheticized, the anthropomorphic meme. Spawned from the Artificial Life laboratory and crossing over into other practices, most notably digital communities and performance, these figures operate as symbolic beings, existing in digital and flesh-like forms, remote, autonomous or closely linked to human initiators.

Digital communities take various manifestations on the Web, such as DigiCity, Recode, Rhizome, MOOS and MUDS, etc. The digital community is an area of sometimes vigorous interface between issues, passions, personalities (both real and imagined), discourse and inane banter. This area is particularly appropriate to the curational (and conservationist) process, as there is a thin dividing line between the notion of work in progress and work in exhibition; much of the activity being truly ephemeral, appearing and then disappearing from the screens without warning. Related to this are Internet-specific manifestations, from listserv communities to random and organized linking between 'gamers', intent upon strategies that compete for supremacy in 'situation fantasies' involving mayhem and virtual destruction.

Writing, using text and image forms the basis of individual, collaborative, and communal experiments which, though yet to have an impact on a wider public, is quietly exploring possibilities and potential. The field is split between the *derriere-garde* literati accessing and proffering their favoured texts, and the avant-garde, hypertexting collectively produced works and hyperlinking every known word of every known language.

Digital video technologies are having a major impact on the way artists are thinking about not just production, post-production and distribution strategies, but also, within the next ten years, their impact on current television programming and modes of reception for erstwhile linear media. Digital special effects is also an area of the entertainment arts that has many resources for development and production poured into it, as does the games market. The public's fascination with 'cinema/TV magic' cannot be overstated.

The games market, both arcades and CD-ROMs, is a much bigger earner than cinema (though cinema is often important in the cross-marketing of both), and many games are 'worked out' on Macs and PCs before being recoded and burnt into chips for Nintendo and Sega, etc. There are some artists associated with this area and clearly, as with manga, it has generated a massive following and a significant aesthetic worthy of many a PhD thesis.

The 'post-modern and conceptual garden' category of production develops out of the

'traditions' of contemporary art practice and, whilst utilizing digital media and being open to the unique possibilities of the medium, is less driven by its specifically digital 'nature' and more concerned with the ideas which are being explored and exposited, freely using non-digital resources and materials in conjunction with some element of computer mediation.

Performance as a live and interactive encounter between performers, audience and digital media are being explored in a variety of ways in several centres. The encounter may run 'formally' in a performance space, or informally in the street through installations, or more hybrid installations which enable, in still unresolved ways, interaction via the Internet. The sense that this becomes an intrusion into street life, observed and measured by a hidden surveillance camera, exemplifies the confrontational, and can attenuate an attempt at communication of a most basic kind, a prerequisite for even the most experiential museum.

Exhibition Formats

Central to the purpose of 'formatting' or designing exhibition approaches is the need to recognize the value of curation as part of the process of knowledge delivery by providing a framework and context for being able to engage with often quite disparate artwork. The description of the exhibition through catalogue design enables remote audiences to participate, and allows discretion by local audiences.

Having outlined some of the areas in which artists are working and the kinds of tools and formats with which they are working brings us to the kind of critical approaches the exhibiting institution might take to curating and presenting the work. Such proposals need to include attention to the medium of delivery. Given that there is so much work being produced, it becomes possible to curate a selection based on advancing a particular theme or context. Decision-making here can be assisted by considering the exhibitions that have dominated the scene thus far, which have tended to be survey exhibitions. Besides *Burning the Interface* there has been a significant handful of shows which have concentrated on surveying the output of Australian media artists. An international survey (like *Burning the Interface*, or the annual *ISEA* exhibition, or ZKM Medienkunst), though desirable, can be as expensive to undertake, research properly and to mount, as any other international exhibition of art. Similarly, histories of artists using media technology are important. Given the speed with which one technology is being replaced by another, a whole strand of work can be rendered unviewable. With the rapid migration of video from reel-to-reel, to U-matic, to SVHS, to Hi8, to Betacam, and now DVD, much of the work made in the 1970s on video is now lost. Whilst for some this may be cause for celebration, it none the less breaks the lineage of work and discourse current at the time of a work's appearance, making study and re-assessment chancy and open to blatant speculation.

Strategies

The 1998 *Site—Time—Media—Space* seminar,[11] hosted by the museum of Sydney, drew attention to the question of the relationship between traditional gallery spaces and the work of developing media artists. Drawing on the experiences of museum specialists who work with media technologies and the research of artists who develop them, it confronted the spectre of the museum as a sculptural shell which receives the musty remnants of earlier ages. Public forums such as this can provide useful insights into the

strategies required to facilitate audience access to the outcomes of media artists' labours within existing public spaces. Most importantly, a dedicated space, custom designed to take account of all conceivable technical configurations that may be needed, is required to maintain a continuous exhibition of digital work (probably one or two works at a time, changed over according to programme demands and resources). This option could require considerable resources to initiate but, once established, requires much less to maintain. Similarly, a project space, which deliberately emphasizes the process of creating 'the multiplicity of interactions' (through integrated educational projects, for instance) would require modest levels of equipment and facilities that most institutions can afford and maintain. These options would maintain the institution's involvement in and connection with contemporary activity in the field of developing media arts on a regular basis.

Conclusion

I have outlined the relationship between some of the outcomes of knowledge research and knowledge delivery—there are others—and related these to the restricted opportunities for gauging audience response. Ascott's 'multiplicity of interactions' may well only successfully occur, as he suggests, solely in electronic spaces, not subject to the agendas of institutions, the tyranny of interlocutors and the constraints of architecture.

As Aurora Lovelock has observed:

> The problematic of cyber space versus museum space is surely the confusion of their inherent topology's [*sic*] within the specific topography of 'site'. Why should these spatial topologies currently, if ever, 'mix well'? ... Traditionally, the museum has been a designated place where classification and curation have been practised to create a sense of cultural invariance and continuity within a site-specific architecture and with 'discontinuous' art objects. The preservation and analysis of artefacts gives the illusion of permanence as well as an underlying order of value.
>
> Paradoxically, in the digital context, the invariance and continuity which is provided by the underlying logic of the digital computer does not automatically give rise to a sense of permanence and value. In fact the opposite occurs. ... Sequential planning, a set of instructions, belongs to topology. In the context of the museum that means sets of objects, the 'Japanese Ceramics Collection', a topology of relationships related to the architecture of the site; the promenade or the panopticon. Alternatively on the CD-Rom, or in the networked 'virtual museum', data objects can be classified through simultaneous 'nodes' of access (Lovelock, 1998).

The design of knowledge delivery and method of access is crucial to understanding the distinction between museum topology, which sets out to propose a rational connection between objects and history, essentially a project of methodology, and museum revelation. The latter, through the act of provision, gives access to the more dynamic and speculative project of contemporary media art, that seeks a multiplicity of interactions, and is a part of the wider process of knowledge development.

There is clearly much to be developed in public spaces and the institutions which create public spaces, in relation to the new media that artists will begin to work with almost as soon as the technology appears. This is no surprise. The development of tools and techniques and the development of ideas is the flux in which artists move. In this time of speed, what needs to be questioned is the structures that place the conservative

nature of the museum professionals in the space between the audience and the rapidly changing domain of the media artist.

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Notes

[1] At the beginning of 1999, the situation in Australia is a case of two steps forward and one back. New media forum and archiving projects are pressing ahead in Melbourne (Cinemedia) and Brisbane (Griffith Artworks) whilst in Sydney, the Museum of Contemporary Art, through the termination of David Watson's position as Cinematheque Co-ordinator, has not only put the claim of the Museum of Contemporary Art to the word contemporary into doubt but also relinquished an animateur with the very qualities needed to establish a moving image department: knowledge, determination and passion.

[2] Rachel Dixon, 1997. Dixon's *Other Spaces*, a report on the marketing, distribution and exhibition of interactive art, was commissioned by the Australian Film Commission and published in October 1997 and is a useful source book for this area. The collated data and opinion unfortunately obscures the complex polemics and the broader strategies that need to be embraced.

[3] This paper is based on talks and presentations given at the following events:*ISEA96*, Rotterdam: Panel Session Chair 'Digital Media and Public Spaces', September 1996; *Art-Iculations* conference, *PICA*, Perth, February 1997; Key Centre for Media and Culture Policy Research seminar, Griffith University, May 1997; '*(Crack the) Binary Code*' conference, Centre for Contemporary Photography at *Interact97*, Melbourne, November 1997; *The Cyber Frontier: the Digital Future*: the 5th International Documentary Conference, Brisbane, November 1997; Australian Film Commission, Industry and Cultural Development branch seminar: *Exhibiting Digital Media*, December 1997; *Microwave* exhibition of contemporary artists' CD-ROM: Videotage International Video Art Festival, Hong Kong, December 1997. With grateful acknowledgments to David Watson.

[4] The term 'killer app' or killer application is computer industry jargon referring to a computer software application which will catch the imagination of the public and sell a lot of copies. This doesn't always benefit the inventor of the application, as Macintosh Computers discovered with their WYSIWYG operating system (the result of programmers and artists working together) which was used as the basis of a clumsy and inferior operating system (Microsoft Windows) that has since captured, through market domination, 90 per cent of the installed user base.

[5] See more in *Artlines* 1 (4) 1996, published by the Arts Law Centre of Australia.

[6] The federal government 1995 cultural policy statement from the ALP/Keating administration. In spite of relentless pursuit of some of the funds that the federal government was saying in Department of Communication and Arts documents it wished to spend in the area of digital media exhibitions, none was forthcoming. The Australian Film Commission conversely was fulsome in its careful support for the exhibition and later, in its touring version to Adelaide, Melbourne, Perth and Brisbane.

[7] Gauguet, Bertrand (1998) Towards a new economy of the digital work of art?, in < *Compacts > oeuvres numériques sur cd-rom*. Rennes: Presses Universitaires de Rennes.

[8] Three publications within the exhibition, *artintact, Mediamatic* and *Artifice*, showed that serious attempts were being made to provide regular channels for niche distribution of artists' work to occur. By 1999, little further progress had been achieved.

[9] One hundred and thirty works were submitted to *Burning the Interface* and only four used the Windows platform.

[10] The listserv forum is an internet tool enabling registered contributors to read and reply to submitted e-mail messages (posts) around a particular broad topic (e.g. exhibiting digital media) whilst pursuing particular lines of research or debate (threads). It is similar to newsgroups (for which registration is not a prerequisite) and is open to intervention by anyone at any time.

[11] *Site—Time—Media—Space—New Media in Museums*, 17/18 November 1998, convened by the Creative Director of CDP Media, Gary Warner, prime media designer for the Museum of Sydney where the seminar was held. Full report in *RealTime* 28 (December 1998).

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