Brave new art world

ARTISTS HAVE BEEN working with computer technology almost since its arrival on the scene in the '40s. The principle has remained the same: digital data is streamed from source or storage into memory, where it is processed with suitable software by the artist watching images on a screen, or listening to the resultant sounds, before being stored and used again later.

Storage is on a hard or floppy disc. It uses the same principle of a magnetised surface that is used by videotapes and cassettes so what is stored is subject to interference, both electro-magnetic and physical.

The delicate and fugitive nature of the CD ROM medium has a direct comparison with the clay and plaster used by the sculptor.

Centuries ago in Greece and China, through the use of complex procedures, these fragile materials were in effect copied into the medium of bronze. Similarly, using a set of software tools, the magnetised surface can be transformed into an exact equivalent in metal: the Compact Disc - Read Only Memory or CD-ROM, a development of the audio CD.

The outcome, achieved by using hot metal to make a copy, is the same: maintaining fidelity and extending the longevity of the artist's work.

The availability of this storage medium has been highly restricted since its

"Land puls" 1.3 x 1.8 metres, by Phillip George

development due to the cost of production. Established publishing and marketing enterprises have been the main users as our 'dissemination culture' continues to diverge from the previous range of distinct cultural industries involved in press and broadcasting.

During 1993 various manufacturers marketed desktop CD-ROM burners, which make individual discs, a desktop technology initially intended for archiving company accounts and records. The technology did attract commerce, but its accessibility has also attracted the attention of artists.

Many artists around the world continue to be at the forefront of the development of tools used in computing, both hardware and software.

Most prefer to use the tools for exploring the limits of the imagination and developing fresh ways of establishing the exchange that takes place between the work and whoever encounters it. The nature of that interaction and the many media (or multimedia) that can be presented within the small space of a computer screen are currently the subjects of intensive investigation.

But artists want lots of resources when it comes to synthesising a world. And 'resources' means three things when it comes to computers': speed, memory and storage. Some of the files associated with moving or still pictures are very large and foremost in the assembly process is the juggling of computing resources so that during the interactive process all the possible permutations of options can be computed without the pauses that will loosen an active engagement.

A broad swath of contemporary artists, not just those with computer experience from other fields, are responding to the potential of the computer/CD-ROM medium as several aspects perceived as problems are addressed.

Previously there was a host of computing systems, of infinite combinations of hardware and software: now the CD-ROM as a publishing and distribution medium has encouraged the convergence of systems for making, and replicating, artwork. It has become quite common for commercial discs to be distributed through Macintosh and IBM Windows which gives greater access by the public to the artist's work.

The ephemeral nature of much computer-based work has restricted the medium's exhibition potential to one-off installations, or playout through video or film recording.

However, the archival specifications of CD-ROM can guarantee that a completed artwork cannot be erased or altered and cannot be duplicated, if the correct safeguards are in place, thus preventing the unauthorised copying and illicit commercial exploitation of artists' work.

Good archival specifications can result in good prospects for financial return to artists through purchase by private and public collections of limited editions of a work, the authoring of multiple runs for wider distribution by niche publishers and the licensing of titles to networks via servers or linked CD-ROM hardware platforms.

Such arrangements can give assurance to the artist that there will be a return on the time and material resources he or she has invested and offer better prospects for financial compensation than through

rentals on films and videotapes, or fees for installation.

Other problems now being addressed include the cost of transferring computer art in the form of files from 'the studio' (the workstation with hard disc), to 'the gallery' (the CD-ROM). This has been lowered, from $150 per copy if done commercially down to $30 material costs if a 'burner' can be accessed.

As well as marketing 'multimedia software packages' for consumer CD-ROM titles, the industry has developed tools for production designed for specialist users rather than programmers, thus offering artists independence at the production stage from expensive production houses and bureaus.

CD ROM offers the artist independence at the production stage.

However, the number of craft skills required of an individual are still considerable. To make a multimedia production they include photography, operating a a film or video camera, lighting direction, graphic design, writing, picture and sound editing, typography, sound recording, computer programming and line production. While some artists have these all these skills at a high professional standard most restrict their expertise to a few and work within their limitations, or raise the money to pay for the expertise they need. For many though, that option is, in Peter Weir's memorable words, too much 'like working in the real estate business'.

Finally, though the business of developing studio practices is in its early days, pioneers in the area can begin to remove the structures and procedures erected by computer specialists. For instance the magpie approach to amassing material with which to work and converting it into digital form is to catalogue the stuff onto a CD-ROM and use the disc(s) as an archive. Material is put onto the working disc as the need arises; no backups, no maintenance.

Art produced using computers can be reproduced using a CD-ROM player connected to equipment in the home.

Artist and audience alike are attracted to the interactive element of this area of computer-based art, which permits the viewer to guide or influence the order or rate of development of the display of the artwork.

"Mnemonicon" 1.3 x 2.88 metres, by Phillip George

A majority of CD-ROMs made by artists function in this way, using a variety of strategies and interfaces.

In August 1994 I commenced research for an exhibition, on bhalf of the Australian Film Commission and the Museum of Contemporary Art in Sydney, that will survey internationally artists'approaches to using the CD-ROM medium. For a medium it has to be regarded as, with its own advantages and pitfalls affecting its material presence and representational system.

The research was completed in March and it is clear that artists around the world have taken up the medium in a way beyond that anticipated by the researchers. More than 130 pieces of work from 112 artists in 14 countries were sent in and 80 CD-ROMs specific to electronic art were identified. One quarter of these were produced in Australia. Europe and the States are the other main centres of activity, with a new title appearing from an individual or a group of artists every few weeks.

Whilst seeking immortality, or maximising commodity value could be major factors artists consider when making their work available on CD-ROM.

As the computing medium becomes more generally accessible fundamental questions can now be raised about it, not only in the area of art production but also in the related areas of distribution, exhibition and critical/theoretical

discourse, via the established channels and via those emerging among networked computers.

To anticipate the social impact on the present of electronically compressing time and space is a problem, on the future daunting.

Could Guttenberg have anticipated the impact of reproducing the written word using wooden blocks? Could Daguerre or Fox Talbot have predicted the social effect of organising silver salts onto metal and paper? Would television's inventor, Logie Baird, have given up if he had seen that hybrid example of technological enfranchisement (don't understand what he means by enfranchisement in this context) Australia's Funniest Video Show?

The next few years will see the expansion of computer networks and the expansion of cable and interactive television services. While being regarded by sections of the Industry as an intermediate technology awaiting the arrival of these 'superhighway' networks, the CD media's material immutability will remain a major advantage as a storage device. Through an interface with whatever distribution system technology provides, the disc, like the bronze artefact, is a stable repository of cultural evidence - art, which through interaction with the user of art in the way that it always has, is capable of becoming knowledge.

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