

# **-Out of GAMUT**

**Sue Gollifer; University of Brighton**

## **Abstract**

Since 1995 I have been significantly involved in curating digital art exhibitions. These include *ArCade 1<sup>st</sup> - 5<sup>th</sup>*, 1995 – 2007 the UK's Open International Biennale Exhibition of Fine Art Electronic Prints, and *GAMUT I 1997 & GAMUT II 2007*. All these exhibitions were linked to the (CADE) conferences. A major retrospective of *ArCade* was held in the State Museum in Novosibirsk, Siberia in April 2005. All the exhibitions have toured extensively in the UK Europe and Russia. The exhibitions have included work by over two hundred and fifty digital artists from around the globe.

In August 2004, as Art Gallery Chair'04 I curated the SIGGRAPH Art Gallery Show *Synaesthesia*, in Los Angeles, USA. Over a thousand digital artists submitted work for the show. The final exhibition included one hundred and twenty digital art pieces ranging from 2D, 3D, interactive, installations, multimedia, telecommunications, screen-based, and computer animation.

The aim of this paper will be to reflect and analyse what I have achieved over these twelve years of curating digital art shows. What lessons can be drawn/learnt from any of these exhibitions, particularly *ArCade*; did I achieve any of my original intentions and objectives? What has been my main function as a curator? Creating these exhibitions through (CADE), has certainly been an interesting experience and I hope in a small way I can be seen an early pioneer and champion of what can be achieved by the use of computers in art and design education.

## **Keywords**

Curating, digital printmaking, authenticity, ownership

## **Introduction**

Personal gesture and 'feel' for materials continues to represent significant factors to those who see Fine Art/ Printmaking in the creative arena of fine art, with a combination of technique and concept whatever the medium. This continues to be true even in the advent of the digital age.

The use of digital imaging makes this an exciting, challenging and innovative time to be an artist/printmaker. Digital art practice often suggests an over emphasis upon applications rather than objects, reproduction over authenticity. The cultural shift this represents may blur, remove, or even reinforce boundaries commonly associated with the activity of fine art/printmaking.

## **Background**

The alliance between art and industry associated with the fine art print continues to be close even in an ever increasing virtual world: for several decades a growing number of artists have been involved with computer technology to generate and manipulate images. In 1968 Jasia Reichardt curated an important show which was held at the Institute of Contemporary Arts in London (I.C.A.) *Cybernetic Serendipity* explored and developed the relationship between technology and creativity. This proved to be a very significant and pioneering exhibition, enabling artists to see the potential that computers had for producing and generating images, and forecasting the prospect of outputting prints from a computer.

Quote from Jasia Reichardt, (1971) *The Computer in Art*

‘The Computer is only a tool, which, at the moment, still seems far removed from those polemic preoccupations which concern art. However, even now seen with all the prejudices of tradition and time, one cannot deny that the computer demonstrates a radical extension in art media and techniques. The possibilities inherent in the computer as a creative tool will do little to change those idioms of art, which rely primarily on the dialogue between the artist, his ideas and the canvas. They will, however, increase the scope of art and contribute to its diversity<sup>1</sup>

Some of the artists in the I.C.A. exhibition demonstrated, for the first time, algorithmic computer-generated art works. Their still images, produced on a computer, were rarely intended to be *viewed* on a computer. It is only in recent years, with the advent of high-resolution monitors, plasma screens and the distribution of images ‘virtually’ by the Internet, and more specifically using the World Wide Web, that output from a computer has not been an enormous hurdle. Obtaining adequate printed output has been a problem for which solutions have been developed over a considerable time. Initially, they could be made with a computer-driven graphic plotter, a pen moving along a horizontal rod, drawing onto the paper, which was rolled on a vertically moving drum. Each line was composed of very small steps: each step corresponded to a specific instruction conveyed to the plotter from the magnetic tape. Next, there were many types of printers, which could produce patterns composed of letters and other type symbols. Briefly, artists used a cathode ray tube display or television screen on which to draw with fleeting patterns of light, which could be preserved photographically. Later developments in dot-matrix inkjet, thermal wax transfer, electrostatic pigment transfer, dye sublimation and laser-printed photography followed. These devices emerged in parallel with the development of bit-mapped graphics, for which the pixel is the basic component. Few artists in the Sixties had access to such computer or output equipment, or were trained in the specialised programming needed at the time to gain control over the machine.

It was only in the 1980s, with the introduction of the personal computer and interactive graphics - paint/draw applications - that artist-printmakers were able to see the full potential use of the computer as a creative tool. It was clear that new technology would play a significant role in the process of printmaking. It has taken a little while computing to achieve this, in the early 1990’s there was little evidence in the form of shows or articles for students or academics to refer to. When I curated *ArCade I*, the first International Exhibition of Electronic Fine Art Prints and subsequently *ArCade’s* and *GAMUT* it was to address some of these issues.

Although the common platform was and still is Apple Macs the important works of refining and developing the output of computers were just beginning. In the early pioneering days, the technology of output from a computer was a serious problem. Converting the image on the computer screen into a tangible object, retaining or enhancing its richness of colour, detail and texture and status as a physical image. The wonderful image on the monitor bore very little resemblance to the final outputted A4 none archival print. Now at last we have cheap affordable print technology available

The exhibitions were also part of my on going research as to how using new technology could be used in fine art practices to create, on the one hand, a new media and on the other a hybrid link between both old and new technology, creating a convergence of ideas, disciplines and practices. In the late 1980’s, I anticipated that new technology would play a significant role in the process of printmaking and developed and gradually implemented C&IT into the main curriculum on the BA Hons Fine Art/Printmaking course in the School of Fine Art, at the University of Brighton. Computer generated imagery has now developed into printmaking medium in its own right. It is also used in other hybrid forms, to create links with more traditional print processes, such as screen-

printing, where it is used either to generate ideas or to produce laser prints for photographic stencils. Thus allowing a bridge to develop between old and new technology. Now all Printmaking/Fine Art students at the University use the computer in some way for their final degree show exhibition. This may be in the form of text documents, to support their more traditional prints, but now a significant numbers of their shows are dedicated totally to computer-generated prints and often with an accompanying www site.

This was my original mission statement for *ArCade I* (1995)

*An exhibition of original, limited-edition, artists' prints, which at some stage in their production involved the use of computers to generate and manipulate the imagery. The ArCade exhibition will demonstrate the range of printing techniques now available, both traditional and state-of-the-art. To include a spectrum of styles and images – figurative, abstract, fractal, feminist, apocalyptic, etc. – to reflect the eclectic vitality of the art which has been engendered by digital technology.*

Quote from Sue Gollifer *ArCade I* (1995)

‘This is a particularly appropriate time for such an exhibition: while artists who wanted to work with computers once had to approach large research or commercial organisations for access to hardware, the explosion of desktop colour computers and relevant approachable software has put a dazzling set of visual tools at the service of individual fine artists.

The most recent advances have been in the technology of output: converting the on-screen image to a physical form while retaining its richness of colour, detail and texture. The ArCade exhibition will demonstrate the range of printing techniques now available, both traditional and state-of-the-art<sup>2</sup>.

Quote from Sue Gollifer *ArCade III* (2001)

‘Although the most prominent platform was – and still is – the Apple Macintosh, the important work of refining and developing the output of computers is just beginning. In the early days, the quality of the printed output from a computer was haphazard. To transform the image on the computer screen into a tangible object, retaining or enhancing its richness of colour, detail and texture as a physical image has been extremely difficult. The lustrous light-formed image on the monitor has often borne little resemblance to the final A4 non-archival print output. At last, we have affordable print technology available, which has helped to develop the digital process into a printmaking medium in its own right. . It is also used in other hybrid forms, to create links with more traditional print processes, such as Screenprinting, Lithography and Etching, where it is used either to generate ideas or to produce laser prints for photographic stencils. New colour-print technology also enables the artist-printmakers to make crucial decisions about scale and underlying surface for their images.



Figure 2: ArCade III Copyright University of Brighton

I hope that ArCade III demonstrates the shift from a celebration of the digital process, and an introductory survey of the available spectrum of styles – represented in the first ArCade – to concentrate on technical and aesthetic progress within a discipline continuous with the traditions of printmaking. To draw a distinction between computer graphics, an area of work which by its nature is readily reproducible and highly visible to the public, and the less frequently seen digitally-generated fine art print, which has presence, texture and status as a physical image'.<sup>3</sup>

Quote from Sue Gollifer *ArCade IV* (2003)

‘Since I have been curating the ArCade exhibitions, questions such as the of longevity and the light-fast properties of the inks have now broadly been resolved, and digital prints are now entering museum collections. In addition, the cost of high-resolution printers has been dramatically reduced, making this form of printing available to students and artists alike. Furthermore, the new generation of printers allow for a wide range of substrates to be used, from hand made paper through to plastics’.

New colour print technology now enables artists to make crucial decision about scale and underlying surface for their images. Just as the choice of tools affects the art that is produced, so does the surface on which it rests. The digital artist can now choose to print on archival watercolour or etching papers; or to produce the image as a large canvas or as plastic poster or billboard, enabling creative development with an emphasis on physicality<sup>4</sup>



Figure 2: ArCade IV Novosibirsk Copyright Sue Gollifer

Current issues within contemporary art practice and the growth of works of art readily available on the World Wide Web, blur the distinction between 'original' and 'reproduction' and often suggests an over emphasis upon applications rather than objects, reproduction over authenticity.

Quote from Margot Lovejoy from her book *Art & Artist in the Age of Electronic Media*

‘Photomechanical reproduction raised questions about the ‘uniqueness’ of copies as art, thus undermining the existing function of art not only because it could provide visual reportage, but because it threatened the aura of the handmade object which relied on the specialised skills of the artists.’<sup>5</sup>

This also raises one of the crucial issues in the field of computer-generated art: the intangibility of the artwork. The work is essentially a freely available signal, rather than a visual artefact, which can be packaged, marketed and sold. Another issue is that of authenticity: who 'owns' it- does it even exist? Computer-aided art in its purest form is not concerned with artefact but with communication and interaction, thus raising issues concerned with the ontology of the art object and the identity of the artist in relation to the work. Can new media be considered within a fine-art framework, or should it be considered as a separate discipline? What are the specific aesthetic challenges of exhibiting digital media and are the various institutional frameworks addressing these challenges?

The challenge for Printmaking now is to move on from the legacy of traditional print to a broader definition of its possibilities, be they in the field of art in public spaces, other arenas, the traditional gallery or on the web, opening up new areas of freedom and diversity and establishing a unique repertoire of aesthetic tools. But even beyond the appropriate uses of new technology, the challenge to Printmaking as an art form is clear it can remain purely a collector's specialism, a niche taste on the fringe of the art world, well removed from the avant-garde or it can fully engage with the world as it exists.

However, the Fine Print world still remains deeply conservative, at odds with the instant transmissive digital image on the Internet and the endless identical reproduction open to revision,

evolution, collaborative manipulation and cross-disciplinary utilisation via the Internet in a vastly expanded creative domain.

The challenge now is to move on from the legacy of traditional print to a broader definition of its possibilities, be they in the field of art in public, art in the gallery or on the web. Creating a synergy between processes old and new; opening up new areas of freedom and diversity and establishing a unique repertoire of aesthetic tools to do *what they have always done....*

Quote from Richard Hamilton in his catalogue that accompanied his exhibition held at Alan Cristea Gallery, London 1998.

‘A medium need not sit in isolated purity. It has always been my contention that the first objective is to achieve a compelling image and that aim demands a felicity in its implementation. There is no law that forbids paint and photography from combining on a single surface or that requires that silkscreen can never benefit from a liaison with collotype or offset or even etching.

In accordance with my practice of setting no limits on subject matter, nor stylistic languages of expression, I see no virtue in circumscribing the technical means of realisation. The image will always be more important than the rationale of its execution.<sup>6</sup>

An example of new opportunities to exhibit and display work was shown in the SIGGRAPH Art Gallery Show *Synaesthesia*, which I curated in August 2004, as Art Gallery Chair’04.

Quote from Gollifer’04

‘This year’s theme *Synaesthesia* demonstrates how artists can excite and stimulate the senses using technology to create art that ranges from low-tech digital plotters to high-end computer graphics and animation. It also features work from both well-established and younger contemporary artists’<sup>7</sup>

*(Synaesthesia is the phenomenon in which the stimulation of one sense modality gives rise to a sensation in another sense modality. The term “synaesthesia” originates from the Greek syn (together) and aisthesis (perceive). The most prevalent form of synaesthesia is “hearing” music or vowels in colour).*

The exhibition showed work by visionary artists in all areas of digital art that stimulated the senses, including 2D, 3D, interactive techniques, installations, multimedia, telecommunications, screen-based work, and computer animation. The viewers to the Art Gallery were encouraged to see, hear, and touch the art, new ways of experiencing art and an opportunity to be engaged with the artwork itself. The work was displayed in various ways including LCD and Plasma screens; denying the physicality of the artwork in favour of light omitted transmissions.

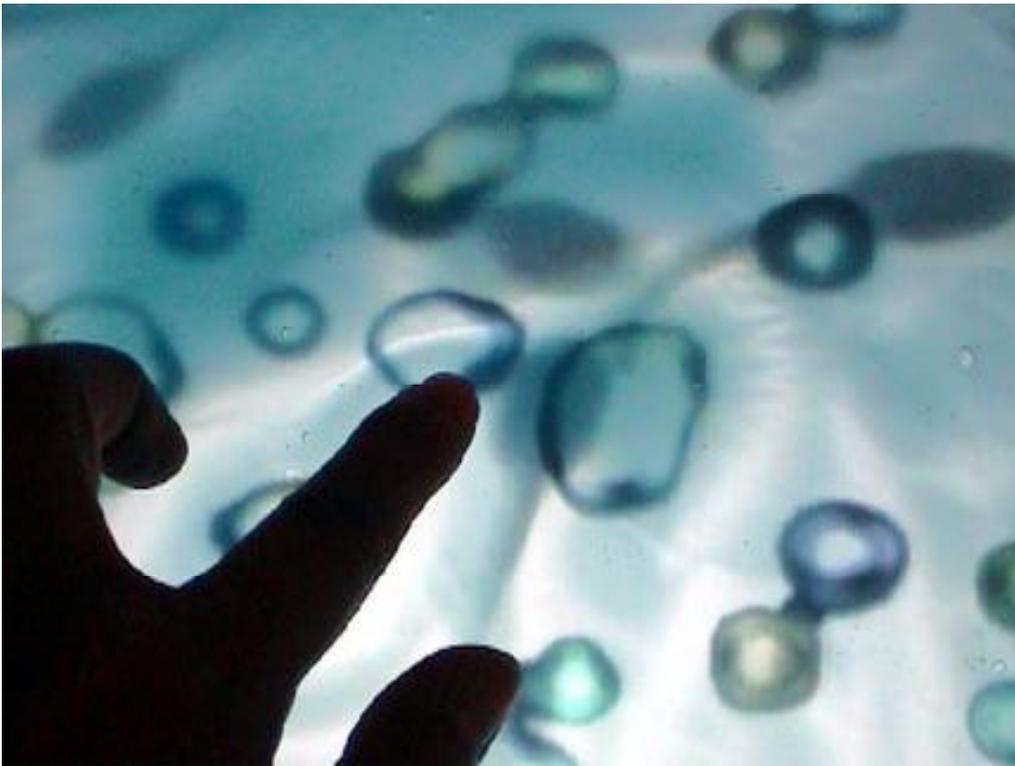


Figure 3:SIGGRAPH Art - Touch the Drop by Kumiko Kushiyama Copyright the artist

Most recently I have been called upon as a jury member for international digital art shows. Often I view work totally online selected from digital files or websites; where again there is little notion over its means of production, its size, scale or physicality. Is this an appropriate means of validating and selecting work? What if the work is a collaborative venture between the technologist and the artist? Who has ownership over the work; can it be seen as an original? Which raises issues of copyright and digital surrogates. This also raises important business and contractual issues, such as the need for written creative partnership agreements, freelance or employment contracts, including clarification of ones own intellectual property rights in such joint ventures.

Indeed currently the role as a curator doesn't end with the exhibition of existing work, it can also consist of further work, as in a virtual museum, plus providing opportunities for new activities such as curating digital archives, networks and collaborations. *Digital imaging* and *digital archiving* opens up the opportunities for providing wider access to the world's artistic and cultural heritage. Museum images and information in digital form can also be distributed over world-wide or local networks and has the potential to change the nature of teaching and research, offering the potential for developing new audiences and broadening cultural appreciation both for recreation and lifelong learning.

### **In conclusion**

Computer-mediated fine art/printmaking offers the possibility of generating 'radically new' physical, aesthetic frameworks. Conceptually print has once more become relevant.

DIGITAL ART MUSEUM (DAM)

<http://www.dam.org/gollifer/>

ArCade

<http://creativity.bgsu.edu/classes/Sp04/ARTC400/arcade/>

SIGGRAPH Art Gallery'04

<http://www.siggraph.org/artdesign/gallery/S04/>

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- <sup>1</sup> REICHARDT J.(1971) *The Computer in Art*, Studio Vista/Van Nostrand Reinhold, New York
  - <sup>2</sup> GOLLIFER S., Digital Creativity, CD Rom Conference Proceedings, University of Brighton
  - <sup>3</sup> GOLLIFER S. Digital Creativity, Artists Space 5, *ArCade III*, Swets & Zeitlinger Volume 12 Number 2
  - <sup>4</sup> GOLLIFER S. CADE Conference proceedings
  - <sup>5</sup> LOVEJOY Margot (1997) p 36 'Post-modern Currents - Art and Artists in the Age of Electronic Media', Prentice Hall
  - <sup>6</sup> HAMILTON Richard, (1997) p 7 '*New Technology and Printmaking*', Hansjorg Mayer / Alan Cristea Gallery
  - <sup>7</sup> GOLLIFER S. *SIGGRAPH 2004 Electronic Art and Animation Catalogue*, Computer Graphics Annual Conference Series. ACM SIGGRAPH. 2004

### **Biographical Notes**

Principal Lecturer in Fine Art, the Course Leader for the MA in Digital Media Arts, and MA in Printmaking and Professional Practice.

She has been a professional artist/printmaker for over 30 years, regularly exhibiting worldwide with her work, which is owned by major international public collections. An early pioneer as a computer artist with her primary research into 'the impact of new technology within the practice of Fine Art'

Since 1995 she has played a significant role in the conference CADE and has the been curator at ArCade which accompanies the conference. In 2004 she was appointed the SIGGRAPH Art Gallery Chair in 2004 the first European to hold this significant position.

She serves on a number of National and International Committees including a Directorship of the Design and Artists Copyright Society (DACS), UK, and the College Arts Association (CAA), USA and the Assistant Editor of Digital Creativity.