iArt

Art & Digital Imaging Technology:
The Top 40 Show @ LACDA

by Roger Macintosh

The use of digital technology to create, manipulate, and display images has been widely adopted throughout the media arts. Kodak moments are occurring less frequently as digital cameras are used to take vacation snapshots and the photo on tomorrow's front page. Just about every movie made today uses digital techniques to create fantastic worlds or simply to make skies blue. Some movies are shot digitally with high definition television cameras in a process tactfully called "electronic cinema". The need to print thousands of costly and fragile release prints will eventually be eliminated by the use of digital projectors in theaters.

Meanwhile, Moore's Law has yet to be repealed and one of the results is that the use of digital image processing is no longer limited to ad agencies and media corporations. Twenty years ago, one would have needed to come up with a quarter of a million dollars to buy a Quantel system the size of a file cabinet that could do a lot less than what you can do today with an iMac and Photoshop. The tools for advanced digital image processing are now available to just about anyone who wishes to use them.

Yet inside the white walls of most art galleries, canvases covered with pigment suspended in linseed oil remain the order of the day and photographs still involve the use of silver halide salts bonded by boiled animal bones (film). While artists naturally use e-mail, web sites and blogs, the art itself usually remains firmly in the analog realm.

Here I should stop and open my baggage for your inspection. My job is using digital techniques in the creation of "fantastic worlds" for movies. After recently spending half a year helping an athletic young lady kill vampires by adding a powerful UV laser arc to the plastic prop she wielded, I found myself killing time on hiatus. The editor of the prestigious art journal you have the wisdom to be reading forwarded an e-mail announcing an open call at a local digital art gallery. I entered, didn't get the gig, and visited the show to see the work of winners. Along the way I came up with a lot of questions, a few clues, and a better appreciation of the state of the digital arts in the local art world.

"Art has always involved technology."

Rex Bruce

If you enter the five words "digital art gallery los angeles" in Google, the first art gallery in Los Angeles that shows up is the Los Angeles Center for Digital Art. LACDA is in two places at once: downtown at 107 West Fifth Street and on the web at < http://www.lacda.com >.

We interrupt your reading to point out that this was the first in a series of 14 URLs referenced in this article. To make this as easy on the eyes as possible, URLs will be treated as footnotes. They also have been collected online so you can follow them with just a click. Safari and Firefox users should point their browsers to < http://homepage.mac.com/rger/iart >. Internet Explorer users should ask themselves why they are still using Internet Explorer and download Firefox. <02>   We now return to the article already in progress:

LACDA has often used the "open call" format to create group shows. One show featured every single entry. <03> This inclusive policy is typical of LACDA Director Rex Bruce, who describes LACDA as being closer to an Internet application than a traditional art gallery. He has taught interdisciplinary arts at San Francisco State and currently teaches the use of various software at LACDA. It is obvious that he gets the importance of digital techniques in art and understands the technology involved.

What is less obvious is how the exclusive use of digital images acts as a force multiplier for the gallery. The LACDA open calls are easily able to transcend geography as digital files are sent to the gallery from anywhere in the world. LACDA uses its own digital archival printer to create the display prints directly from the artist's digital file, and so eliminates all the problems associated with safely shipping, storing, and returning the artwork. Time is also transcended in so far as past shows are kept online. Since the original art is digital, the online versions are small but very accurate versions of what is on display in the gallery. So although the Top 40 show has closed, you can still see the show online <04>.

One of the difficulties in dealing with digital art is trying to define it. Rex Bruce solves the problem by using the most inclusive possible definition: "All styles of 2D artwork and photography where digital processes of any kind were integral to the creation of the images are acceptable". In other words, any photograph taken with a digital camera would meet the requirement. Given the prejudice against digital cameras among galleries that feature photography, this is an entirely reasonable point of view for a gallery devoted to digital art, but can a digital photograph really be considered digital art? As usual, there is no easy answer.

There are three distinct parts to the imaging process: image capture, image processing, and image display. My interest centers on the image processing stage and from this point of view, the distinction between images captured on film and those captured on CCD chips is relatively minor in so far as any image must end up as pixels in a computer before the "fun" can begin. Personal interests aside, the image processing stage is the most compelling because the aim of digital technologies in the other two areas is to catch up to the capabilities of film (at a much lower cost and with greater convenience), while digital image processing technology already greatly surpasses the traditional analog equivalents. The power to manipulate images down to the sub-pixel level with complete control and repeatability brings us to one of the biggest obstacles to appreciating digital art: understanding what you are looking at.

Understanding can be difficult with every kind of art, but more so in one with the ability to combine the "reality" of photography with the freedom of painting. Special challenges are presented by digital art that does not display any obvious digital techniques or artifacts. In other words, everyone knows they are seeing digital image processing when a dinosaur chases a jeep but what about invisible effects such as a painted sky which looks so real that it is thought to be part of the original photography? In the movie business, people will often show the original film footage on their reel (portfolio) as well as the finished effect so the viewer can appreciate what has been done. An entire journal is devoted to nothing but this sort of detailed explanation. <05> As appreciation of digital effects spreads to those outside the industry, documentaries showing the process regularly appear as bonus material on DVDs.

However, when I submitted my digital images to LACDA's open call, there was no means of visually "explaining" the images, so I included a URL to the "before" images as a supplement to my entry. For example, a photo of pigeons is shown to be a collage of seven separate images taken over several days. <06> The problem of interpreting what one is seeing was repeated many times at the Top 40 show.

When I first saw the image by Andy Lomas I wasn't sure if it was a photograph of a sculpture or a computer generated image of something that doesn't actually exist. A similar thought crossed my mind when I saw E. G. Crichton's image: is this a photograph of some gunk or some incredibly complex digital recreation of gunk? It would be quite an accomplishment to coax such a thoroughly organic mess out of a computer. Alas, the image turned out to be gunk, and despite Rex Bruce's explanation that Crichton carefully selects and mixes various substances to create the gunk, my own interest rapidly faded. Meanwhile, on his web site <07> Lomas explained that his image was a computer simulation of "millions of particles randomly flowing in a fluid field". The path of each particle was added together in an accretion process that creates images resembling trees, sponges, and other organic shapes. The web site shows this process in motion, which provides a vivid explanation as well as being a very interesting piece in itself. <08>. As it turns out, Lomas was the head of computer graphics at ESC Entertainment, the company that provided most of the big effects sequences in the two Matrix sequels. Part of his responsibilities included creating "the biggest rainstorm in cinema history" which sounds very much like millions of particles in a fluid field.

Nathan Selikoff's image proved to be another example of motion paths made visible as digital sculptures, but it could just as well have been a photograph of a very delicate mobile. Selikoff's site <09> makes for interesting reading. He may still be a student at the University of Central Florida, but he has an insiders' perspective of working in the digital image creation business (short version: there is no time to smell the digital roses the client has asked you to create).

"My whole intellect is engaged by these images:
as a technician, solving problems and analyzing,
and as an artist, creating, selecting and designing."

Nathan Selikoff

In other cases, the process completely overwhelmed the result. Jaeman Cho's image looks like some faint lines but it apparently is some complex mathematical translation of the image of a tree. An image by Milos Rankovic looked like a poor excuse for a collage, but it turned out to be some form of automated random assembly of images which is part of his PhD thesis: Theory and Practice of Handmade Distributed Representation <10> These were extreme cases where the methodology behind the image was far more compelling than the image itself.

Based on what I'd like to hang in my living room, my favorite was Ansen Seale's simple image of what appears to be a long train by a beach. What I thought was a fairly straightforward Photoshop enhancement of a photograph turned out to be a digital slit scan, and an unusually calm one in comparison to the artist's other work involving this technique. <11>

I found the Top 40 images to be a lot better than most gallery shows, but many of the pieces became more interesting after learning what the artist had done to create the image. If someone who does this kind of work all the time is unsure of what he's seeing, then the average viewer probably doesn't even know they should have a question. Rex Bruce agreed that more information would be helpful and will be posting artist's statements on line. Perhaps an iMac should be a part of every exhibit, loaded with explanations and deconstructions of the works on display as well as links to the artists' own web sites.

Returning for a last try at the impossible question: OK, it's art, but is it digital art? It may be useful to look at a case where digital techniques were an integral part of the creation of the work, but the artist does not consider the work to be "digital art" at all. The LACDA Top 40 show opened on a Downtown Art Walk Thursday night <12> so I also visited the 626 Gallery just down the street. <13> There was a show of photographs by Amie Potsic called Tropicália. <14> Although her photographs are taken with a traditional film camera, the rest of the process is completely digital. The 6 x 6 cm negatives are put through a drum scanner and translated into digital files containing over 80 million pixels. The files are opened in Photoshop which is used to do everything one could do in a traditional darkroom and then some. The image is printed using a LightJet printer that uses lasers to expose traditional photographic paper. However, Potsic does not consider her work to be digital art but instead thinks of digital technology as an invisible tool which takes images captured on film and transfers them to archival photo papers for display.

In her role as a teacher at UC Berkeley and the San Francisco Art Institute, Potsic sees a strong trend towards the use of digital cameras, Photoshop, and Epson ink jet printers by the next generation of photographers. Traditional photography will continue, but become increasingly rare. Probably among the last hold outs will be artists, struggling in some distant future to find boiled animal bones on the black market.

So, as usual in the amorphous realm of art, each artist deals with digital technology in their own way. Some make it the center of their work, others adapt it to their art or use it behind the scenes, while many ignore it completely and leave it to younger artists. For all those who enthusiastically embrace the new digital imaging technologies, LACDA serves as an excellent focal point and resource.

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List of URLs
You are encouraged to visit http://homepage.mac.com/rger/iart
where the following sites can be visited by simply clicking on the links.

<01> http://www.lacda.com/
<02> http://www.mozilla.org/products/firefox/switch
<03> http://www.lacda.com/exhibits/snaptogrid.html
<04> http://www.lacda.com/juried/top40gallery/index.html
<05> http://www.cinefex.com/
<06> http://homepage.mac.com/rger/pigeoned
<07> http://www.andylomas.com/aggregationImages.html
<08> http://www.andylomas.com/video/aggregation_movie_001.avi
<09> http://pegasus.cc.ucf.edu/~nselikof/
<10> http://www.leeds.ac.uk/fine_art/milos/asnakedgene/gallery.html
<11> http://www.ansenseale.com/index.cfm
<12> http://www.bgfa.us/daw/
<13> http://www.626gallery.com/
<14> http://www.amiepotsic.com/