THE IMPACT OF DIGITAL TECHNOLOGY FROM A PHOTOGRAPHER'S PERSPECTIVE

At this very time in history we are seeing an explosion in very exciting and for some, worrisome changes in photography. In an extremely short timeframe, we are witnessing the change from the traditional optical/chemical processes of the past to the new digital technology. The music industry was the first to complete this transition and the movie industry will surely follow. For film, image storage still needs to reach the capacity to economically handle 30 frames a second at high resolution.

Economic Impact

Economically, photographers have been impacted negatively in a number of ways. The current economic slowdown has reduced revenues, already meager for many in the arts. This slowdown comes at a time when substantial re-investment in education and in new and fast depreciating equipment and software is needed. For example, in a one year time span, a top professional digital SLR camera body priced at $ 46,000 was replaced with a newer and superior model for $11,000. If you were one of the photographers who purchased one, you would have lost $35,000 on this one piece of equipment alone. There are other similar dramatic examples in printing equipment, computers and photographic software.

The catch 22 is that if a photographer switched early, they would have suffered substantial financial loss but would now be ahead professionally. If they waited, they saved money but have now fallen behind technologically. In either case, years of investment in traditional professional cameras, enlargers and processing equipment are now almost worthless.

Digital printing materials have increased the price of printing for the professional photographer. For example, optical/chemical printing papers cost 38 cents for an 8"x 10" sheet. Pictro and Dye sublimation materials cost approximately $ 3.80 for the same size - a 10 fold increase. This increase in cost is in some cases offset by a reduction in labour costs.

Another economic impact has been the fact that with scanners and inexpensive photo quality printers now in many homes illegal copying of work has become increasingly simple. In addition, an ever increasing number of clients now request images in electronic format.

Selling images in electronic format without an order for prints is a problem because traditionally, no professional photographer ever "sold" their negatives. Session fees where kept low and used as loss leaders to attract clients. Photographers depended for a large part of their income on print sales. With reduced print sales, photographers should compensate by raising their session fees and charging for the rights to reproduce their work, but many have been reluctant to do so.

This reluctance is based on two reasons. One is the perception that the value of a disk with computer data is less valuable than a set of finely finished and retouched prints. Another is that too many competing photographers have entered the field. Often, the only way new and less experienced (and sometimes even more established) photographers believe that they can attract clients is with lower prices – this forces others to follow suit making it even more difficult to survive in this for many already challenging industry.

The Learning Curve

The digital learning curve is very steep, especially for people who are not well versed in computer technology. Even with knowledge of computers, it takes several years to adapt your thinking to digital imaging. Almost every day a photographer needs to learn something new and once a new technique has been mastered, a newer version to purchase and learn is released. For digital workflow to be smooth and successful, many new concepts need to be understood and mastered. Here are but a few of the new concepts to be mastered in digital photography.

Mega pixels, bit depth, capture software, histogram, electronic white balance, electronic file handling, tif, gif, jpg, psd, pdf, interpolation, anti aliasing, moiré and noise suppression, pixel painting, gamma, curves, levels, file storage/servers and back-ups, Firewire, USB, Ethernet, DVD and CD burning, digital portfolio management, color management, calibration, digital retouching, un-sharp masking, digital filters and plug-ins, RGB, CMYK, Lab space, ICC color profiles, pictro printing, dye sublimation, and the list goes on.

The Client

For clients, digital technology has been a winner. In the digital studio, they can see the entire creation process in "real time". All of the images can be immediately viewed with great color and detail on a large projection screen. Changes can be made on the spot and input from clients and art directors can be instantly incorporated. No longer are there any unpleasant surprises after the film has been processed that might require additional photo sessions and the resulting increased costs. For publication, the internet and print, images can be sent via e-mail or FTP, saving valuable time and courier charges.

An estimated 35% of professional photographers already have partial digital capability but still shoot film. A much smaller percentage offer both full digital capture and in-house printing. More photographers are joining the digital revolution every day and most are thinking about converting in the next few years. I believe that only photographers who switch to digital in the next year or two will still be able to compete. In this fast changing world, clients expect good quality, speed and service. They will no longer wait several weeks just to see the "proofs".

Artistry And Digital Imaging

Every day we are exposed to a barrage of mediocre images. For an image to stand out from the crowd, ever more exceptional work needs to be created. The new tools are exciting and offer endless possibilities for creativity and new art forms previously only dreamed of. The bar for artistry and excellence in image making is being set ever higher by the true professional.

There are also many who do not value quality and there is the false perception that photography has become easier. I recently talked to an intelligent and successful businessman who sincerely believed that you can take average pictures, "fix" them in Photoshop and end up with professional looking results. Nothing could be further from the truth. Only properly composed and executed images will print well, get noticed and have the desired impact. There will never be a fix for poor art direction and composition and you can never rectify improper lighting.

Photographic Education

For this section to be most useful, I asked Jacques P.E. Hurabielle, PhD for his comments. Jacques is the program chair for the Department of Photographic Technology at NAIT. The "essay" he sent me was extensive and well beyond the scope of this article but here are some of the highlights quoted from his essay…

"Most providers of photographic training are now outfitted with equipment designed to support the industry as it was in yesteryears, making the task of providing relevant training increasingly challenging.

It is no exaggeration to say that photography today is re-inventing itself, and that many of the associated challenges are comparable to those faced in 1839 when photography first emerged from fine art painting. We currently face challenges that are unprecedented in the life of our institutions.

We need to review curricula for widespread obsolescence, modification and addition of courses. In addition, embracing digital imaging has staffing implications: when instructors were hired, they typically came to their positions with sound technical training and a wealth of industrial experience. However, the re-invention of photography demands a degree of knowledge-maintenance far exceeding "keeping up with

changes in the industry" – which educational providers have done all along.

Additional challenges are posed by equipment/material price increases, decreasing currency value, higher cost of new technologies, and the need for frequent upgrades. Educational budgets have decreased severely over time, and capital funds – when and where they exist – are typically but a pale caricature of what they need to be.

Without a substantial increase in resources it is highly unlikely photographic education providers will be able to ensure training relevancy for much longer.

Ours are challenging times, for we currently witness both the re-invention and expansion of photography."

The Environment

The environment has surely been the biggest winner in the advent of digital photography. In years past, traditional photo processors used 220-volt to power its pumps and heaters. The photo wash water would run 8 or more hours a day. Developers and bleach fixers were required to process prints and the effluent discharge wound up in the sewers. Contact sheets and proofs needed to be printed in order to preview the images. Inevitably, each year millions of discarded proofs found their way into landfill sites. All prints where protected with a spray coating of lacquers. Operators worked in spray booths and wore special protective masks to keep the toxic fumes from reaching their lungs.

Today, superior and benign laminate protect our images. No more fumes escape into the atmosphere. Old fashioned proofs have been replaced with modern LCD projection. Any unwanted images are simply deleted, nothing goes into the garbage!

To produce photographic prints Pictrography Printers use RGB Argon lasers to write the image and only small amounts of distilled water to process them. That means zero toxic effluent. Electrical power consumption has also been drastically reduced to less than one tenth of what it used to be. Without a doubt, we can now run the cleanest, most environmentally sound photographic and design studios ever.

Giclée (Giclée meaning droplet or to spray) is another technology that is taking over from photo/chemical processes and use long lasting pigmented inks. The beauty of these printers is that they can print without darkroom or chemicals directly to almost any media, including canvas, fine art paper, canvas and even translucent and backlit material.

For me personally, working digitally has become an obsession. The image quality of the newest professional digital cameras with full size CMOS chips is truly astonishing. With my new 44" wide body Giclée printer, I am able to produce large archival fine-art prints and canvasses in-house and with incredible sharpness and color gamut. I am in photographer's heaven. Film? Oh ya, I remember film.

Con Boland CPA MPA

Con Boland - BIO

Con Boland holds the distinguished designation of Master of Photographic Arts (MPA) from the Canadian Professional Photographers' Association and is an internationally celebrated fine art photographer who has called Edmonton his home since 1967.