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Inside Cone's head

An interview with fine art printer and inkjet pioneer Jon Cone

Even though he is still relatively young, Jon Cone is considered one of the foremost experts on fine art digital printing, producing digital prints for many of the most outstanding contemporary artists and photographers.

PEI: Can you give us a little background on yourself and your company?

Jon Cone: I own two companies. Inkjetmall is the big commerce

[operation] where we manage the desktop printer world and provide technical support for the products we create for Epson printer users. We make sure that the prints that come out of their printers match the image they see on their monitors.

Inkjetmall sells fine rag papers, pigment color inks, dye inks, and hundreds of ICC profiles for various printers and paper combinations. It's

also the distributor of our ConeTech Piezography black-and-white products, quadblack inks and custom software for Epson printers. These were borne out of my company in Vermont, Cone Editions Press Ltd. (www.cone-editions.com), a printmaking studio established in 1980.

At Cone Editions Press, we started using computers in 1984 and eventually became IRIS graphics marketing and development partners for the fine arts market. We began using the printers and bettered them. We began to make inks [for the IRIS, initially.] We began to make software. But every time we made a solution, it was because we had a difficult fine art product or a very hard project for a photographer, like Richard Avedon, who contracted with us to make his portfolio. His demands were greater than what the IRIS could do, so we had to develop ink and software for it. It took us two years. Then we began to sell the inks and software. The Piezography products are no different, we developed custom solutions to work on Epson printers because they were affordable. This evolved into Piezography for the Epson 3000 that, with our system, produced a black-and-white print on a \$1,000-printer that looked better than what we could do with a \$100,000 IRIS.

In our studio, we are always trying to cut the edge. We developed things like Digital Platinum which emulated the look and feel of platinum prints. About eight years ago, we developed the Low Gamut ink line which is just now selling as Small Gamut Inks. These allow photographers to make black-and-white prints over a range of blue to brown tones. We also teach print-making workshops.

We have a bit of a mission. My goal, as everything goes digital, is to make sure that all the analog values are preserved





...we are in this niche market because we want to make a contribution to the history of photography. Unlike us, large companies do not make decisions based on what good photography should look like, but rather, on getting as many photographers as possible to use their products. So we spend our R&D dollars on Cone Editions Press with the hopes that there will be something left to look at in the art world many years from now. But then, who cares how long it lasts if it doesn't look great? We need to maintain that aesthetic essence in inkjet printing, and I think we are doing that right now in black-and-white reproduction.

PEI: *What are your thoughts for photographers, who all of a sudden are selling inkjet color output in their businesses and using watercolor papers and canvases?*

JC: True watercolor paper is coated with gelatin, which does not work with inkjet technology. The materials commonly being referred to as "watercolor papers" by photographers are actually etching, lithography, and printmaking papers that have been adapted for inkjet printing with special coatings. Most traditional printmaking sheets and rolls are archival because they are acid-free and made of cotton. They have been used for more than 100 years by printmakers and have a proven track record. You don't want a paper that deteriorates, and you want it coated so it will display the maximum color gamut and density range of the pigments. True archival papers are inert in a stable environment. Output with pigmented inks, an image can be stored for centuries. Chemical-based photographic prints will eventually deteriorate, even if you freeze them. This applies to C-prints and CibaChrome.

Companies are introducing coated archival paper every day. Epson America Inc. has a true archival paper made for them by Crane & Co. Inc., of Dalton, Mass., that makes only acid-free papers. It's called Smooth or Textured Fine Art and comes in rolls and thick sheets. It's an excellent product also.

PEI: *Do you have any advice for photographers using these papers?*

JC: For photographic output, they should probably use the smoothest archival papers available. I once hung many of my images at a show and I noticed there were tiny shadows in the image area from the spotlight on the wall. The Hahnemühle/Conetech Photo Rag and Orwell papers are excellent in this regard, as is the Epson Smooth Fine Art Paper by Crane. We love the feel of textured paper and are used to looking at images on a table when we process, where you don't notice the texture, so it's important to see what they actually look like on the wall and make sure the textures are not overpowering.

PEI: *What about canvas materials?*

JC: Those materials have been adapted in a similar fashion for inkjet printing by way of special coatings. But you have to be careful about products with no track record. There are many materials that have been proven by fine art printers, but we still don't know the long-term effects of mounting and finishing on certain new processes. The best way to get information is to talk to the fine art printers who have the most experience.

PEI: *Do you think professional photographers will help to grow the archival paper market significantly?*



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Top: A 360-degree panorama by Gregory David Gorfkle, scanned and printed at 19 feet by 44 inches by Cone Editions Press on a Piezography Pro 9000. **Above:** Piezography can show a greater visual dynamic range than silver halide prints, especially in images like this with such a broad scope of shadows and highlights.

JC: Yes, because the difference between fine-art reproductions and photography is blurring. What seem like new problems to photographers are old hat to fine print makers and are issues they've already solved.

PEI: *Outputting pigmented ink prints on matte papers and canvases is fine, but what about the photographers who are looking to make prints that look like conventional RA-4 prints?*

JC: The Epson Stylus Pro 10000—what an amazingly great printer—and the

Stylus Pro 5500 provide this solution with Luster and Semi-Gloss papers and Epson pigment inks. The resultant prints have greater permanence than photographic prints, so it's already arrived. There may be a few minor issues left, like metamerism [the colors in the prints not looking the same under all lighting], but these should be worked out in the next few generations of printers and pigment inks.

PEI: Let's talk about what you are known for, black-and-white fine art printing and your Piezography system.

JC: I've been developing black-and-white solutions since 1993 for the Iris printer, and many of these are in use in the field. With the Piezography system, we wanted to make a print that's better than a darkroom print. We wanted to overcome the limitations of silver halide, and produce a greater visual dynamic range and greater repeatability with fewer environmental hazards. Silver prints have trouble getting started in the white areas [of the tonal curve], are steady and linear in the middle, and go black very quickly in the shadows. As a result, they display a limited range of tonal separation. Piezography allows us to print many more tones. We are now able to show phenomenal shadow detail, which we could not get by other means.

PEI: That's fine for the matte papers, but what about gloss and semi-gloss papers?

JC: Pigmented inks don't like gloss coatings. If paper manufacturers could produce a gloss paper that would truly and easily accept pigments without adding dyes to the inks, it would be out already. We are working with several people to address this, but it's an expensive problem to solve. We are trying to satisfy the high-end of the market in terms of image quality. We could have come out with a lower-quality ink with more dyes in it, but at the expense of longevity. ◀

For more information about Jon Cone's printing techniques, visit www.inkjetmall.com.