

# From Image Capture to Carbon Print

## Pushing the B&W Photographic Medium in the Digital Age

[www.PaulRoark.com](http://www.PaulRoark.com)

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### A. Image Capture – The NYC Experience

1. **Digital “full frame 35 mm” Leica M9** – a minimalist approach.<sup>1</sup>  
Rangefinder design allows better and lighter wide angle lenses.  
Expired patent on Leica M mount allows competitive industry.  
Leica, Zeiss & Cosina/Voigtlander have full lines.  
Zeiss and Leica publish MTF curves to objectively compare their optics. See the following URLs:  
[http://www.zeiss.com/C12567A8003B8B6F/EmbedTitelIntern/CBion2.8\\_35mm\\_ZM/SFile/CBion2.8\\_35\\_ZM.pdf](http://www.zeiss.com/C12567A8003B8B6F/EmbedTitelIntern/CBion2.8_35mm_ZM/SFile/CBion2.8_35_ZM.pdf)  
[http://en.leica-camera.com/service/downloads/lenses\\_for\\_rangefinder\\_cameras/](http://en.leica-camera.com/service/downloads/lenses_for_rangefinder_cameras/)  
Zeiss 35mm f/2.8 used for NYC.  
18 MP Kodak CCD, micro lenses allow wide angles, & no AA filter.
2. **The EVIL** (Electronic Viewfinder, Interchangeable Lens) camera technology -  
<http://www.luminous-landscape.com/reviews/cameras/nex-intro.shtml>  
A possible future competitor.
3. **NYC Impressions** -- [http://www.paulroark.com/Impressions\\_of\\_NYC.html](http://www.paulroark.com/Impressions_of_NYC.html)  
Some results from one trip – one camera, one lens, no tripod, large format quality.

### B. Image Processing – Photoshop CS4

1. **Lightroom**, the new hot product, is for me nothing but a way to find images in my computer.
2. **RGB to Grayscale conversion** – split channels;

I work with 16 bit Tiff files, so the original RGB file must be converted.

My general workflow is to create a duplicate layer, apply an adjustment to the duplicate layer, and then “paint in” effects with “eraser” tool.  
The image is then flattened and saved.

The specific RGB to grayscale workflow is summarized here:

<http://www.paulroark.com/BW-Info/RGB-to-Grayscale-Conversion.pdf>

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<sup>1</sup> “The world's smallest, lightest Full Frame digital camera;” see <http://www.luminous-landscape.com/reviews/cameras/m9-first.shtml>. See also <http://www.luminous-landscape.com/reviews/cameras/m9-paris.shtml>

### 3. Two important new Photoshop capabilities:

Photo Merge – Stitch multiple frames to make a panorama or very wide angle view.

Align Layers – Allows multiple zone focus for greater depth of field.

## C. Printing

### 1. Carbon for image stability

<http://www.paulroark.com/BW-Info/>

<http://www.paulroark.com/BW-Info/3MK-ABW-60.pdf>

### 2. Cotton substrate for longevity – “Carbon on cotton”

Arches HP uncoated – QuadToneRip, special processing;

Epson HP natural (no OBAs) coated – Highest dmax, standard inkjet.

### 3. Image Transfer to Alternative Substrates – Tiles, etc.

**a. Multiple processes** - The differing characteristics may not be apparent at first. E.g., tiles may appear to be “fired” but seldom are, and most can’t take heat or rough treatment.

**b. Dye Sublimation** – Heat transfers dye as a gas; they fade. This is the dominant commercial process.<sup>2</sup>

**c. Pigment** – various processes<sup>3</sup>; only pigments will have reasonable lightfastness

#### (1) Transfer sheet

Similar to traditional Polaroid transfers, here the image is first printed on a smooth clear plastic film substrate. A paste composed of gelatin, Golden GAC 200, and sometimes marble powder (dry athletic field marker material) and/or other ingredients is spread

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<sup>2</sup> Artists at Gallery Los Olivos appear to have tiles made by <http://www.laurelsherrie.com/>, an Arroyo Grande artist who, on her web page, does not specify a process other than saying the image is “transferred to ceramic tiles with a permanent heat process.” In an e-mail she has confirmed to me that she is using dye sublimation.

<sup>3</sup> A very expensive flat-bed inkjet printer may be the best method, but it is not readily available to most artists.

over the final substrate. The printed image on the film is placed and pressed ink side down on the paste, which loosens the ink from the film and glues it to the new substrate.

Bonny Lhotka DVDs - <http://www.lhotka.com/bonny/Home.html>  
Sells DVDs, workshops, and other products for this.  
Defects, particularly when distressed, make them unique.

Nitsa -- <http://nonphotography.com/blog/image-transfer/tile-image-transfer/PermEnamel><sup>4</sup> & mod podge<sup>5</sup> on standard tiles.

All transfer sheet workflows appear to inevitably result in less than perfect transfers of the images. This may be a plus to painters but a negative to photographers like me.

(2) **Decals** – May be able to make transfers of higher quality.

(a) **LazerTran** -- <http://www.lazertran.com/>

A full article summarizing one workflow is published at  
<http://www.art-e-zine.co.uk/imagelazertran.html>

I have summarized the process summarized at  
<http://www.paulroark.com/BW-Info/Tiles.pdf>

**Porous substrates** – image is said to go into the substrate. Alcohol, turpentine, and oil based polyurethane may dissolve the decal. (It has not so far for me.)

**Non-porous substrates** – e.g. glazed tiles – image may scratch off.

(b) **Durable coating** – many variables.

Yellowing – aliphatic (as opposed to aromatic) chemistry.

Oxygen barrier?

Ideal, but not likely. Thicker is better. Glass best.  
May be able to transfer image to back side of glass.

UV block? Carbon probably does not need blocking.

(c) **BelDecal** – This is a more traditional decal supplier.<sup>6</sup>

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<sup>4</sup> <http://www.deltacreative.com/pcid/137/Default.aspx> -- claims to be closest to glaze without an oven firing.

<sup>5</sup> <http://www.plaidonline.com/apMP.asp>

#### d. Commercial service bureaus

##### (1) Art On Giclee -- <http://www.artongiclee.com/pages/tile.php>

The materials discussion from this outfit is informative.

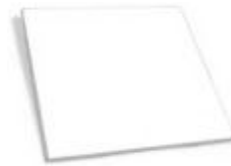
##### **Glossy Tiles**

This glossy, ceramic tile provides an ideal surface for art and photo reproduction that allows you to create custom patterns and designs for your interior design project.

*Due to the glossy surface, these tiles are susceptible to scratches so it's recommended that these tiles be used for decorative purposes only.*



6" x 6" Unit Price \$13.20



12" x 12" Unit Price \$42.80

##### **Satin Hard Coat Tile**

Recommended for vivid photo and art reproduction. This ceramic tile is a highly-resilient and scratch-resistant matte finish wall tile. You may use any commercially available adhesive for ceramic tile. We recommend un-sanded grout. These tiles may be used for exterior installations where freeze/thaw is not a factor.



6x6 Unit Price \$18.60



12" x 12" Unit Price \$36.25

Most of the commercial offerings appear to be dye sublimation processes.<sup>7</sup>

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<sup>6</sup> <http://www.beldec.com/inkjet-instructions.html> – Instructions.

<sup>7</sup> Major tile supplier, with information on tiles: [http://www.bisoncoating.com/Bison\\_Coating\\_Tiles\\_s/3.htm](http://www.bisoncoating.com/Bison_Coating_Tiles_s/3.htm)

<http://www.bisoncoating.com/Articles.asp?ID=147> – Articles

[http://www.bisoncoating.com/Smooth\\_Glass\\_Tiles\\_s/24.htm](http://www.bisoncoating.com/Smooth_Glass_Tiles_s/24.htm) -- Glass

Dye sub organization -- <http://www.dyesub.org/press/bisonopening.htm>

(2) **Images in Tile** -- <http://www.imagesintile.com/products.php>

This URL shows some multi-tile installations.

(3) **Canvas From Photo** -- <http://www.canvasfromphoto.com/id18.html>

Epson UltraChrome pigment inks, apparently, are used by this company.