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CLASS: Lecture/PPT (2 hour)
Sunday, March 1, 1:30-3:30pm

TITLES: **Mastering Mounting: Handling Digitals 2026**

OBJECTIVES: All giclée are inkjet, but all inkjet are not giclée. First you need to know what you have; only then can you select the correct technique for handling it. This session will explore and compare mounting alternatives, adhesives, and substrates to handle art and signage in the 21st century.

BIBLIOGRAPHY, REFERENCES, READING:
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Digital Process and Print Series, Thomson Course Technology, Boston, MA, 2005.
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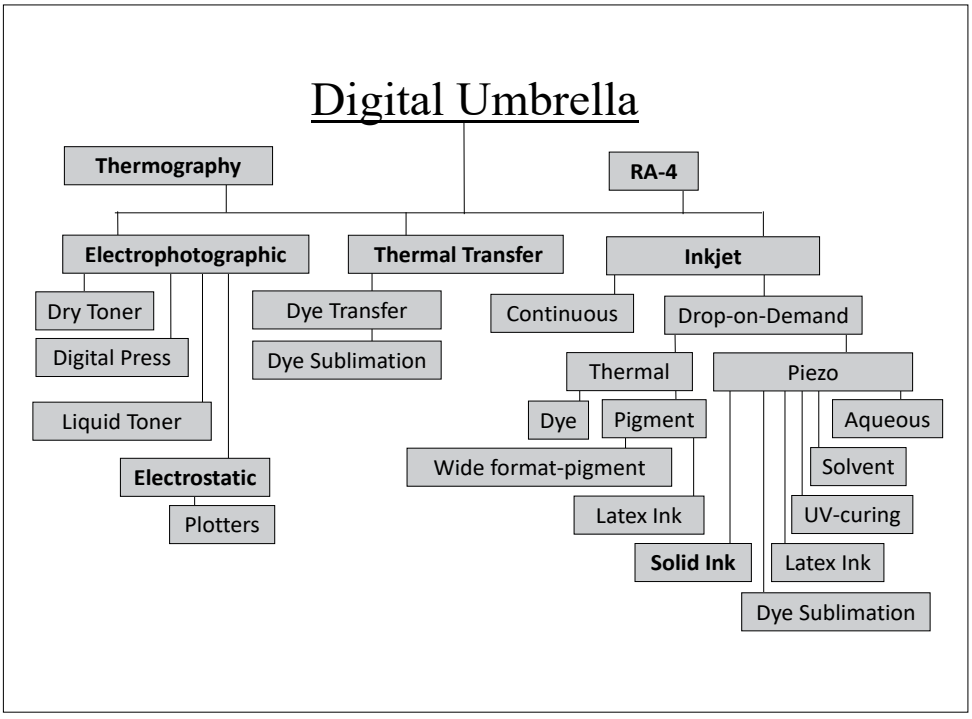

Mastering Mounting: Handling Digitals 2026

I. Digital Umbrella 2025

Thermography and RA-4 are disappearing
Dye Sub is now Thermal and Inkjet
Printed canvases are now mostly Solvent (Eco-solvent), UV, and Latex
Some are considered for fine art, most are not

II. Typographic Method

Thermographic Printing

Direct Thermal = Paper coated to change color
Raised Print Process = Plastic resin powder heated to puff 3D

III. Digital Print Technologies

Electrophotographic = *Dry toner B&W and four-color copies from an existing document*

Wet liquid ink photocopying and dry xerographic toner copying. Xerography is Greek for "to write dry" and is an electrically charged drum that receives an illuminated image that is converted into a dot pattern.
Dry Toner (B&W and Color) = Brother, Canon, HP, Lexmark, Xerox
Liquid Toner (Color Digital Presses) = HP Indigo

Electrostatic Printing = *Pigmented toner on dielectric paper not used for fine art, laser printers*

Uses static electricity to transfer an image to a charged drum. A laser negatively charges a cylinder to the image pattern, positively charged toner is attracted to the negative areas of the drum, special dielectric paper is pressed against the drum to receive the toner and is set through heat rollers. This process uses a heat set ink, not thermal papers.
Plotters and Printers (monoprint & Color) = HP, Roland, Epson

Thermal Transfer = *Four-color dye and pigment on a ribbon of wax-like paper that transfers with heat*

A head comes in direct contact with the uncoated side of the wax ribbon pushing the inked ribbon to the surface of the paper. Ink is heated and transfers to the surface as a dot pattern.
Dye Transfer = Brother, Epson, Zebra
Dye Sublimation = Epson SureColor, HP

Inkjet Printing = *Liquid inks sprayed as dot patterns onto assorted substrates*

What is Inkjet?
- Process = Thermal vs. Piezo
- Format = Rollfed and Flatbed
- Size = Desktop, Large (18-36") Wide (36-120"), Grand Format (over 10')
- Inks = Aqueous, Solvent, EcoSolvent, UV Curing, Latex, Sublimation

Four Basic Technologies - Aqueous, Solvent, UV Curable, Latex

Inkjet vs. Giclée
- Archival Inks
- Is Solvent Giclée?

Continuous Flow/Tone = Tight dot pattern that appears continuous
- Such a fine dot pattern is created when jetted, a 300 dpi appears to be that of 4000 dpi
- IRIS, Epson, Roland, Canon, HP Z-Series = Fine art giclée and photo realism

Drop-on-Demand (DOD) = All other technologies

Thermal = *Heats ink in a reservoir, pressurized and jetted onto paper*
- HP PhotoSmart, DesignJet; Canon imagePROGRAF
- Dye based aqueous inks; swellable coated media
- Provide vivid color; most not waterproof; subject to most rapid fading
- Pigment based aqueous inks; often marketed as "archival quality"
- Better long-term durability and UV- resistance.

Piezo (Micropiezo, Piezoelectric) = *Ink squeezed through nozzle when voltage is applied*
Epson, LexJet, Ricoh, Roland, Mimaki
Liquid or solid; water, solvent or oil on microporous coating

Aqueous Inkjet = *Pigmented, Water based, Embeds into receiving layer*
Desktop, Large format, Wide format
Used in fine art and large format images

Solvent Inkjet = *Pigmented, Waterproof, UV-resistant without special over-coatings*
Eco-Solvent Inkjet
Epson, Roland, Mutoh
Hard solvent ink requires specialized ventilation for fumes
Mild or Eco solvent ink for enclosed spaces
Dominantly uncoated vinyl, flexible surface signs, banners, exterior use

UV-Curing Inkjet = *Cured by exposure to strong UV-light, totally dry once cured*
Canon, Lexjet, HP, Ricoh
Wide and Super wide format, commercial use
UV radiation creates a chemical reaction of cross-linking into a solid
Uncoated substrates = wood, stainless, ceramic tiles, plastics, glass, aluminum

Latex Inkjet = *Aqueous pigment ink printed on low-cost, uncoated, solvent media*
Resin Latex Inkjet
Developed and released by HP in 2008;
Ink evaporates; latex particles bond into a durable film;
Dry and ready-to-use out of the printer on all media
Designed for vinyl and flexible signage (Tyvek)

Dye Sublimation Inkjet *= transfer or direct print for fabric, requires heat curing*
Epson, Mimaki, Mutoh, Roland
Replaces screen printing for polyester textiles
Heat set, is permanent and washable

Solid Ink (Phase Change) = *Solid to melted to solid, CMYK color stick or wax puck*
Xerox Versalink
Dye in wax applied to paper creates a slightly raised surface; mostly commercial

IV. Digitally Printed Canvases
Shear Strength vs. Tear Strength
Mounting Digital Canvas and Photos
HA Board Comparisons
High Temperature = 180F
Bainbridge HAF, Single Step,
Medium Temperature = 150F-160F
Step 150 – discontinued
SpeedMount, Kool Tack, Gilman InSite
Low Temperature = 130F
Gilman MountCor, Mount Cor Canvas (permanent HA)
Reversible Boards = KoolTack Preserve, Bainbridge Restore = 150F-160F

V. When in Doubt …Cold Mount
High Tack PSA with Rollers
HA-PSA-Cold Film Applications and Comparisons