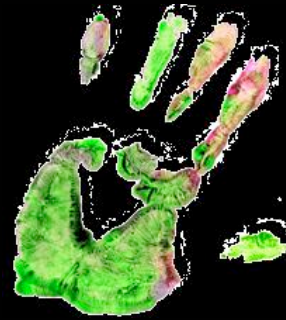


# HP Indigo LEP Technology



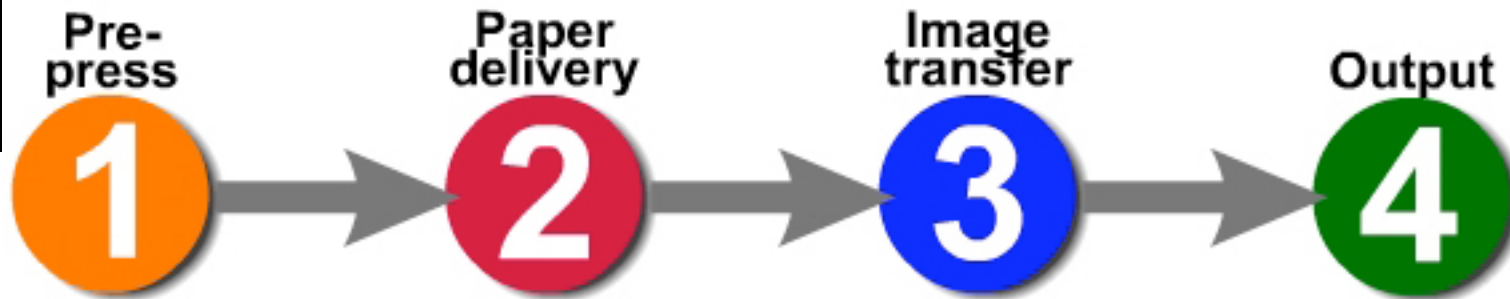
Laura Field  
HP Indigo, Media Manager  
The Americas



*hit* **PRINT**



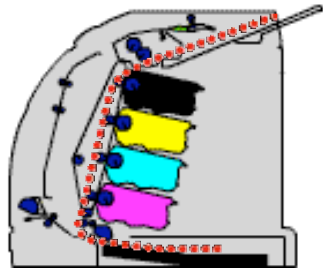
# Basic Printing Process



# Process comparison with other technologies

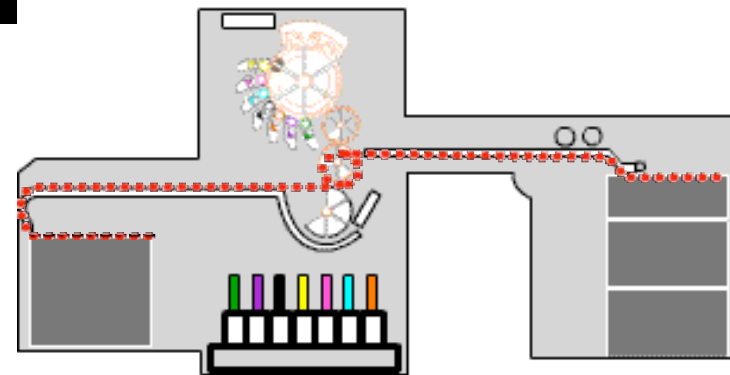
Toner – dry xerography  
Fuser melts toner onto paper

HP Color LaserJet

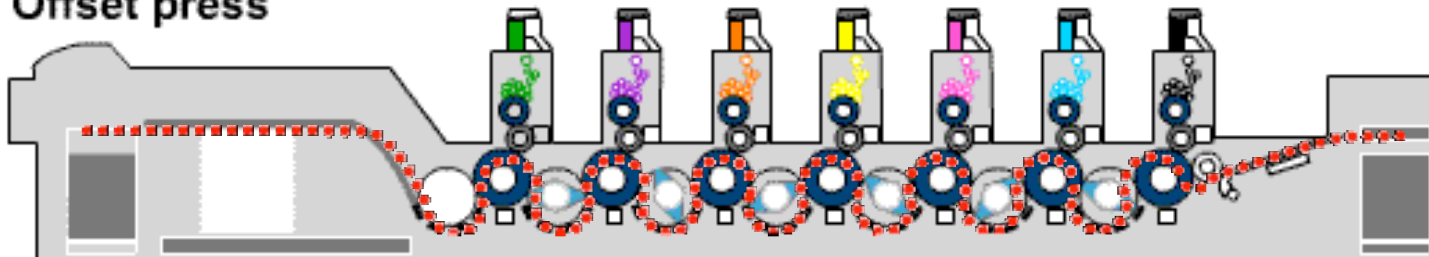


Liquid Electrophotographic (LEP)  
Electroink 4.0 forms a film

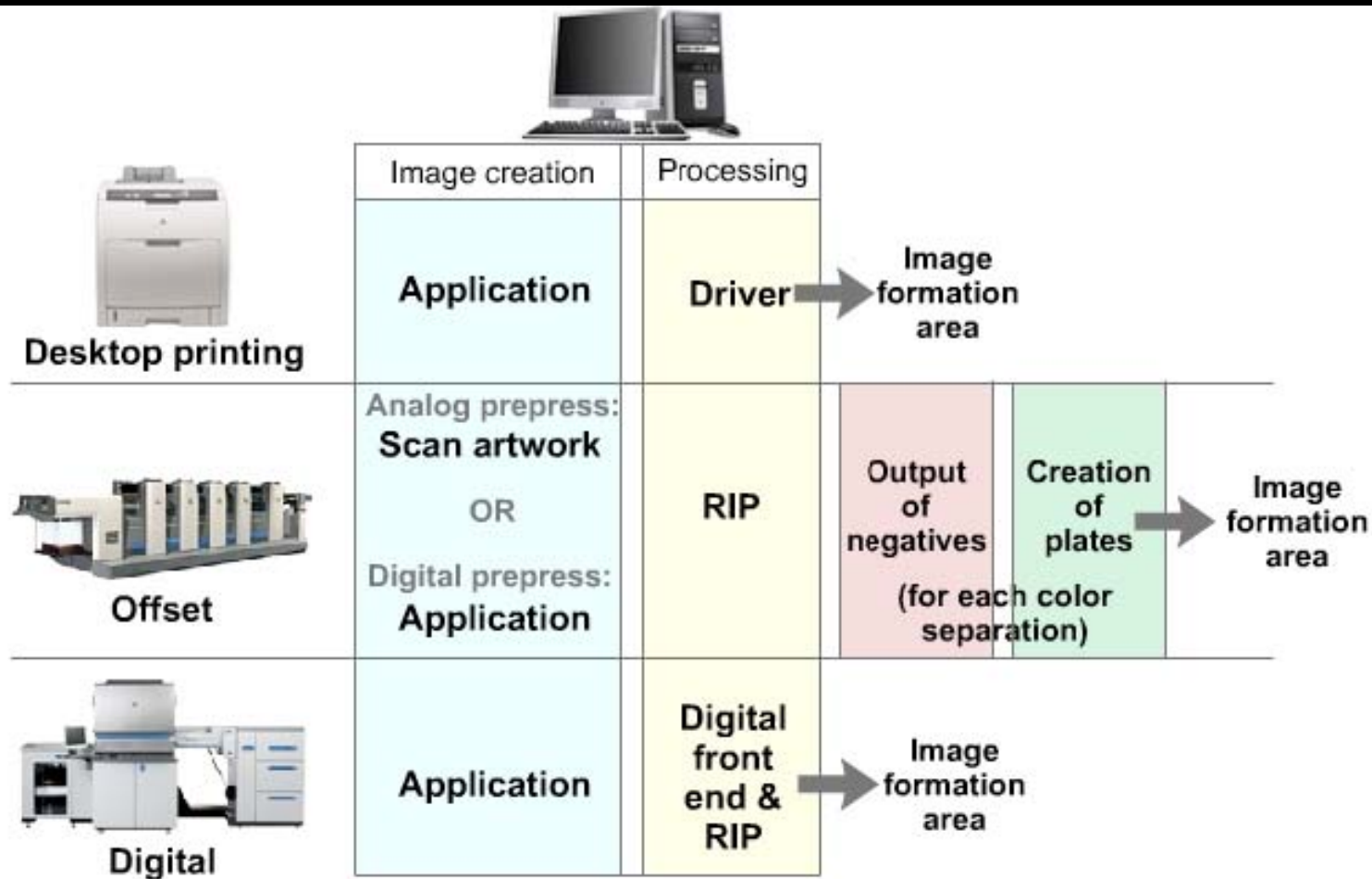
Digital press



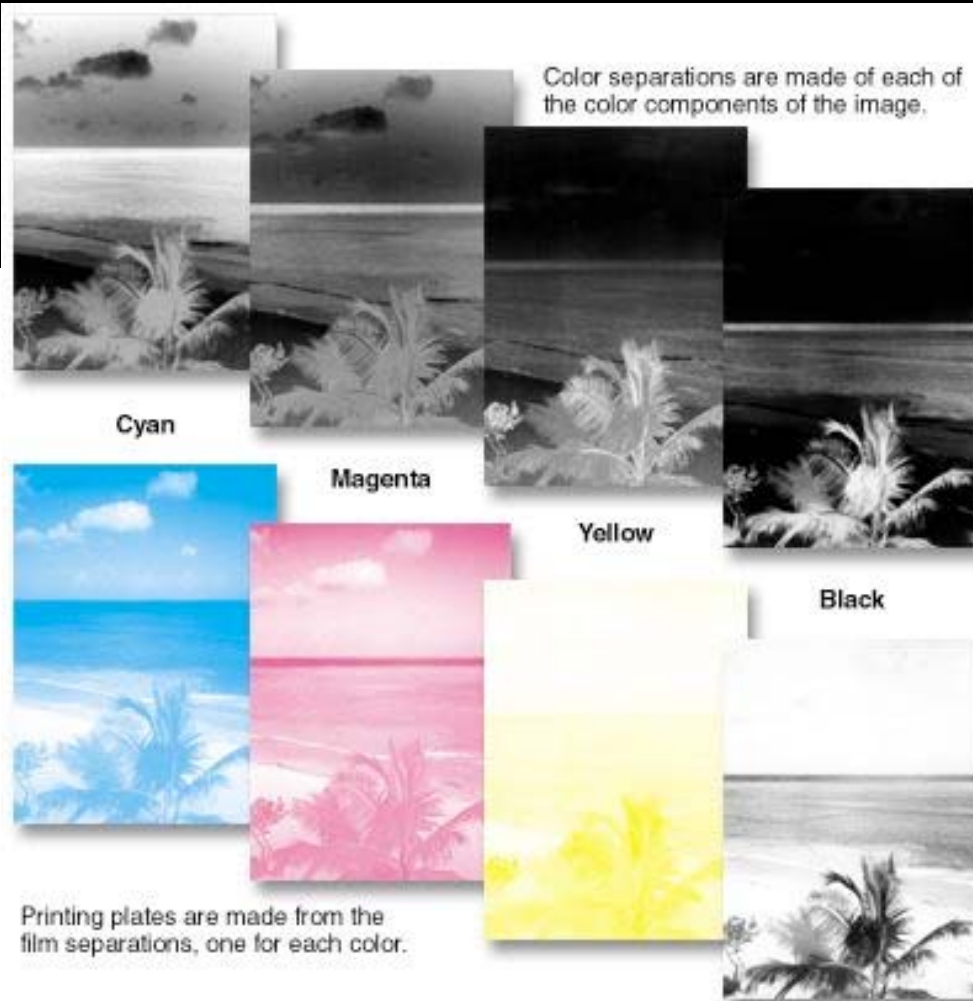
Offset press



# Pre-press

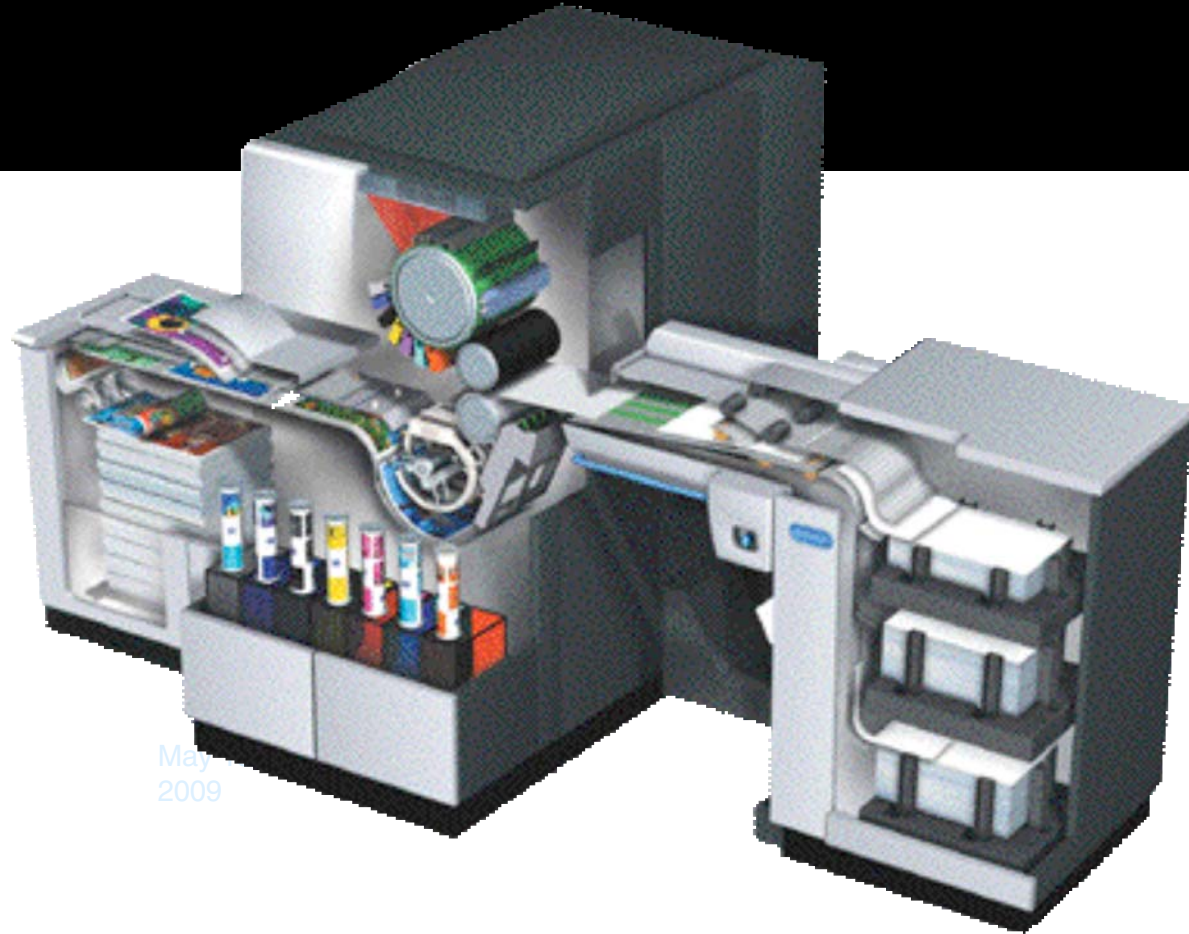


# “RIPing” a file into CMYK



C = cyan  
M = Magenta  
Y = Yellow  
K = Black

# Image transfer components and LEP Ink



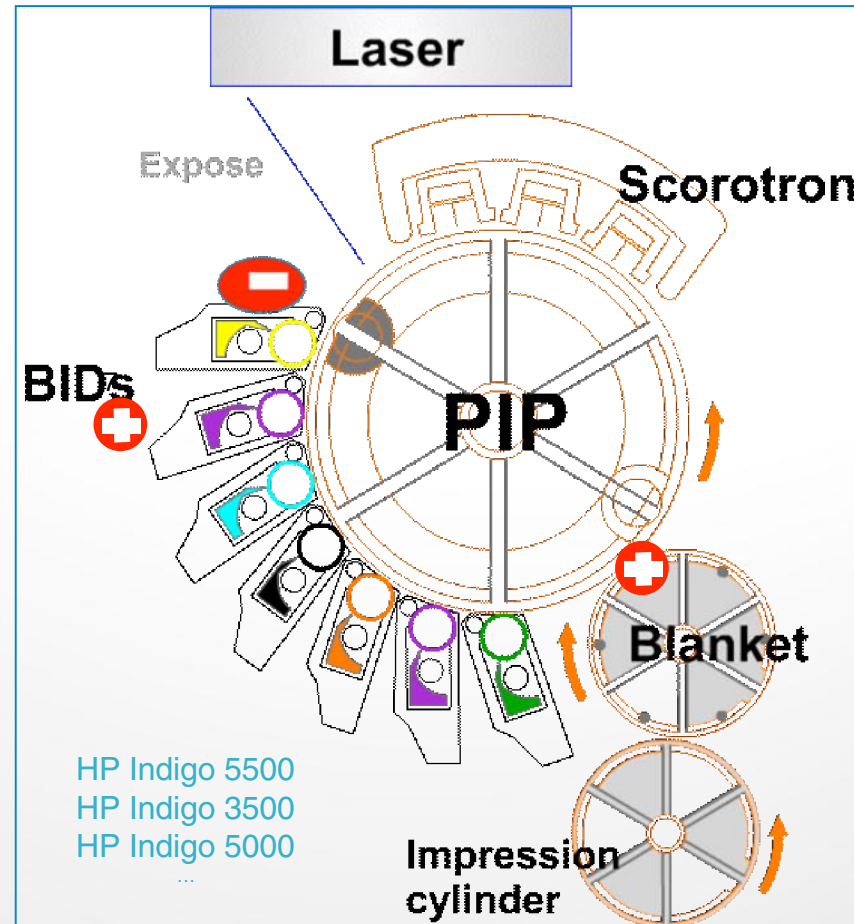
May  
2009



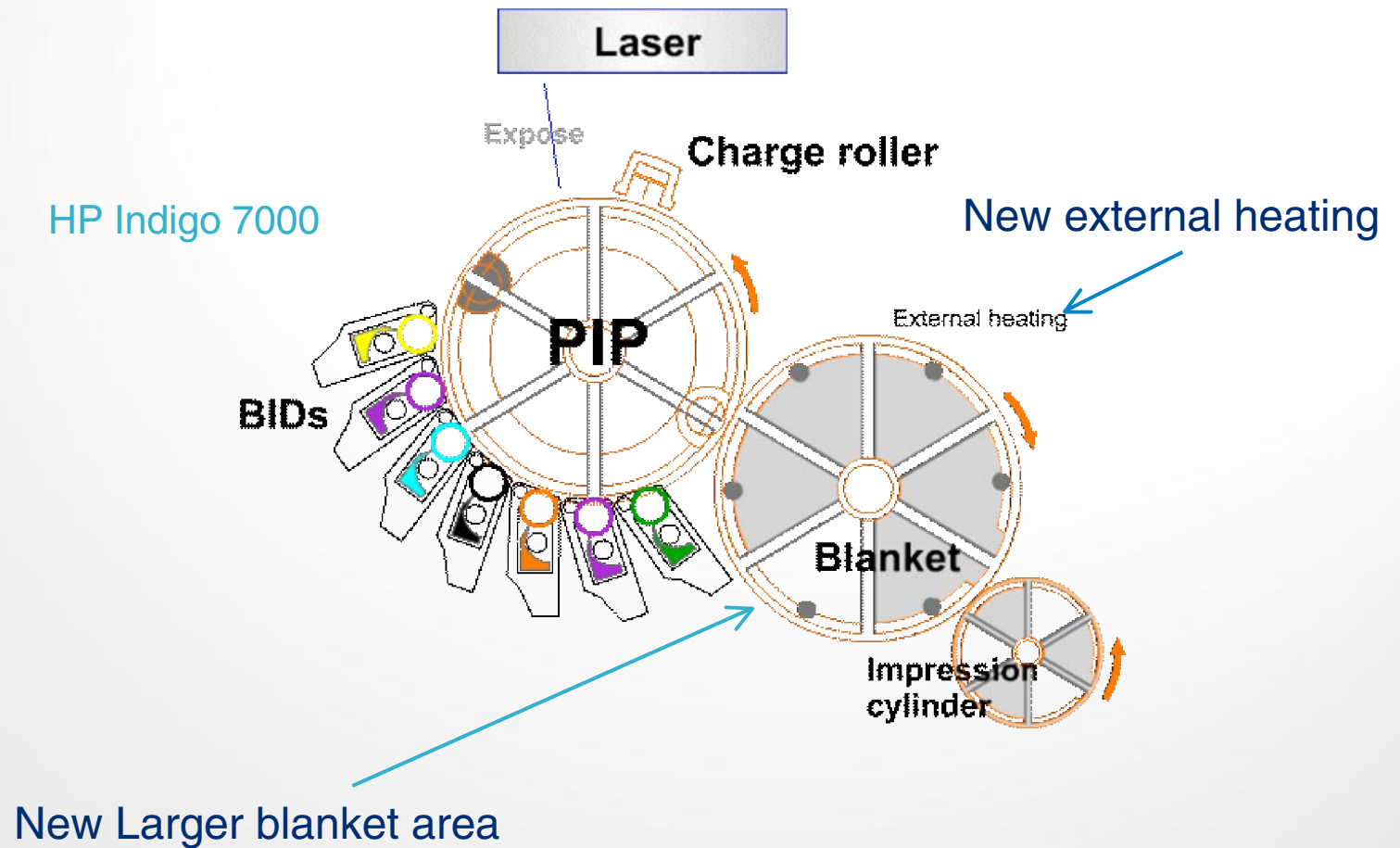
# Image transfer process

## Electrostatic forces moves the ink

1. PIP is negatively charged but VERY negative - up to 1000 volts!
2. When laser strikes the PIP it discharges almost all of its charge
3. Ink is negatively charged but is positive in comparison and is attracted to the less positive areas of the PIP.
4. PIP transfers ink to blanket through temperature differences AND pressure



# New Commercial Press Transfer Process



# Indigo generations: one shot and four shot

- Image transfer process four-shot

Commercial presses:

\_ 7000

\_ 5500

\_ 3500

\_ 5000

\_ 3050

\_ 1050

- Image transfer process one-shot

\_ All web presses: w3250, w7200

\_ All Industrial presses: ws4500, s2000, ws6000



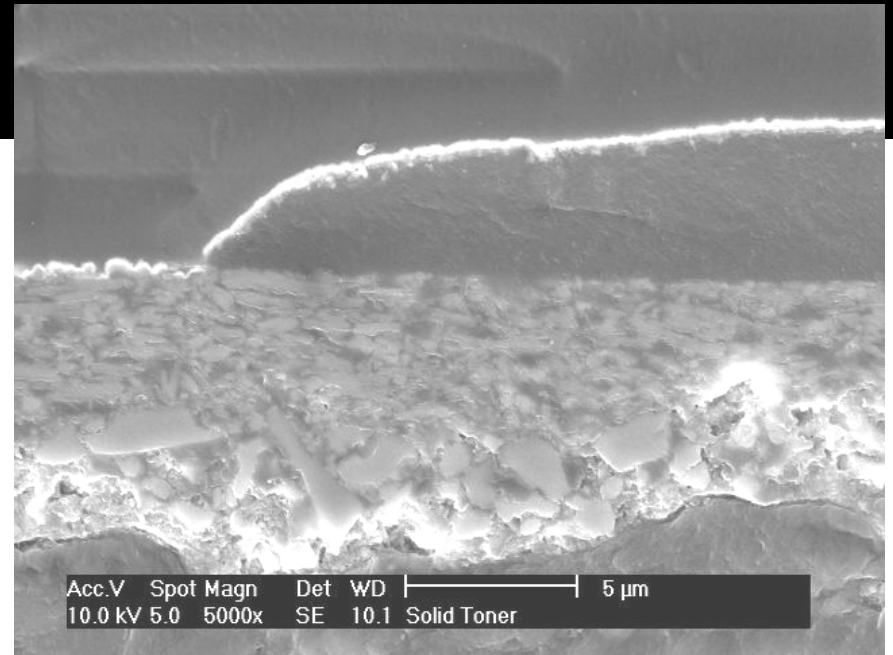
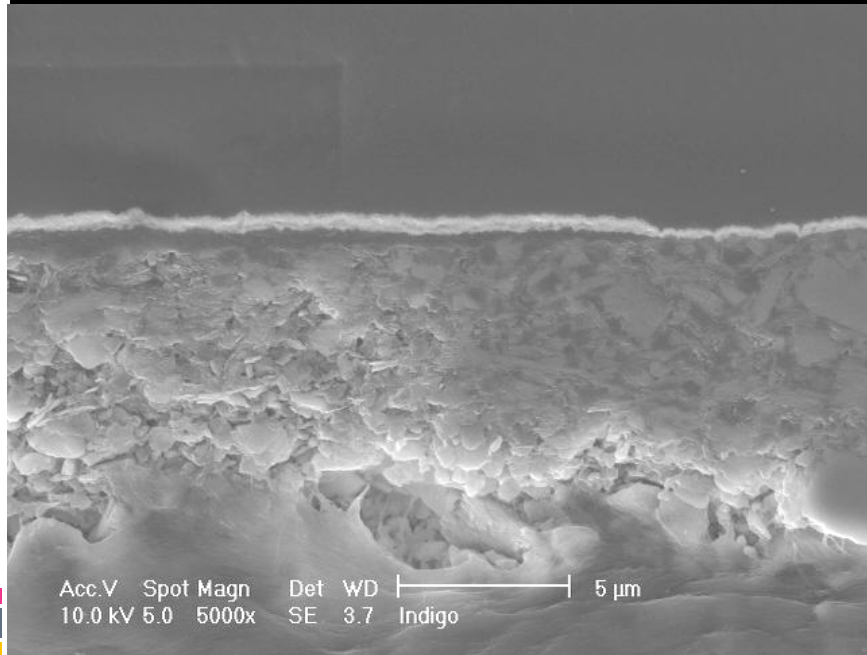
# LEP – Liquid Electrophotographic ink

Like other digital printing technologies, HP ElectroInk enables digital printing by electrically controlling the location of the print particles.

HP ElectroInk is supplied as a concentrated paste that is loaded into the press



# Particle Size of LEP vs. Toner





# Media: What works and testing

# Three types of certified papers

- Plain papers
  - Papers that naturally work with HP Indigo presses.

€



€




€





# Evaluation of Media

- North America's testing facility is Rochester Institute of Technology (RIT)
- 



# Testing method

- The substrate certification procedure is built from 3 main categories:



# Substrate grades

## Star Rating

- \*\*\* 3 stars: best performing papers; fewer print cleaners needed; no blanket memories at least up to 12K impressions.
- \*\* 2 stars: recommended papers; some print cleaners may be needed; slight memories may be seen at 12K impressions.
- \* 1 star: good papers; print cleaners generally required; some memories may be seen at 12K impressions. Approved tape test, after one hour.

		***	**	*
	Measure	Best-performing paper	Recommended paper	Good papers
Transport	Runability	No jams or other issues	1 jam or minor issues	1 jam or minor issues
Fixing	Peeling: 100-400% K, 10 minutes	>90%	>80%	>80% only at nominal
	Peeling: monochrome black at 10 minutes	>80%	>70%	>70% only at nominal
	Flaking: guillotine, 5 minutes	<1 mm at 300% K	<1 mm at 200% K	<1 mm at 200% K only at Nominal

Region:  \*  
 Machine Type:  \*  
 Media:  Grade:

\* - mandatory field

- ☆☆☆ Best-performing papers, suitable for more demanding applications and higher ink coverages. Best ink adhesion and blanket compatibility.
- ☆☆☆ Recommended papers, suitable for standard applications and ink coverages. Good ink adhesion and blanket compatibility.
- ☆☆☆ Good papers, suitable for less demanding applications and ink coverages. Sufficient ink adhesion and blanket compatibility for most applications.
- ☆ Green Star Substrates refer to certified products based on previous certification methods (prior to March 2006). The current standards of performance now ranks each media via a star system, which indicates the substrate's performance level for run-ability/transport, ink adhesion & blanket compatibility individually.

380 records returned

Name	Weight (US)	Weight (EU)	Certification Date	Grain	Runnability	Blanket Compatibility	Fixing	Supplier
»Accent Opaque Digital Smooth	! NEW 50#/ .0038"	72 gsm	11-Apr-2007	Long	☆☆☆	☆☆☆	☆☆☆	International Paper
»Accent Opaque Digital Smooth	! NEW 60# text smooth/ .0046"	92 gsm	07-Apr-2007	Long	☆☆☆	☆☆☆	☆☆☆	International Paper
»Accent Opaque Digital Smooth	! NEW 70# text/ .005"	104 gsm	11-Apr-2007	Long	☆☆☆	☆☆☆	☆☆☆	International Paper
»Accent Opaque Digital Smooth	! NEW 100# text smooth/ .0074"	-----	11-Apr-2007	Long	☆☆☆	☆☆☆	☆☆☆	International Paper

# Thank You

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