













Drupa Report FPPA - Chicago - October 2008

Ian Hole V P Market Development EskoArtwork



düsseldorf, germany www.drupa.com

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DRUPA 08 - First Glance & Initial Status

- WHERE :Düsseldorf, Germany
- SEGMENT: Printing, Paper & Media industry (DRuck Und PApier)
- PERIOD : every 4 years
- 391,000 visitors from 138 countries
 - 41% Germany, 59% International (increase from 52%)
 - 7% South America, 15% Asia (up from 13.6%), 6% North America (same)
 - Average stay 3 days, 48% top managers (buyers)
 - 39% used public transport (reduced road traffic)
- 1,971 exhibitors from 52 countries
- 3,000 journalists from 84 countries
- 10 Billion EURO orders (\$14B)
- Theme (retrospective) 2004 "Technology"



Areas Covered in this report

Press Advancements On-line monitoring/measuring systems Digital Printing Plate imaging Digital Workflows



New Press Advancements

Make-ready/Changeover Improvements Time Waste Reduction Automated Impression Settings Print Quality Optimization Increased Speeds



• Fischer & Krecke

- SMARTGPS
 - Graphic Positioning System
 - Registration and Impression settings are done automatically
 - RFID inset in sleeve gives direct position data to press
 - Non-Optical System
 - Greatly minimizes make ready waste and time
 - Stated to be ~20 meters of substrate









• Schiavi KCR 300

- Automated Impression Setting System
 - Reads printed image across web
 - Accurately sets plate cylinders and anilox rolls
 - Compatible with any type of web inspection system
 - Able to be retrofitted to existing presses







• Windmoeller & Hoeschler

- 2 New Presses Announced
 - Vistaflex
 - Miraflex
- EASY-SET/EASY-REG
 - Automated impression and registration setting
- EASY-COL
 - Developed with X-Rite and Sun Chemical
 - Automated Press-side ink color matching and mixing
 - Color deviations automatically corrected



WINDMOELLER & HOELSCHER CORPORATION









• Omet VaryFlex-F1 Press

- Fully Modular Design
 - Interchangeable flexo, gravure, rotary screen, hot & cold foil units
 - Application of holograms in tight register
 - "Fly Cut" Technology
 - Variable repeat sheeting from 6" to 33"
 - No tooling changeover
 - Quick changeover







• Soma Falcon 66

- Fast Print Set-up System
 - Automatic Register Setting
 - Camera-based
 - Automatic Impression Setting
 - Uses print marks to set anilox and plate cylinder
 - Print set-up < 66 meters
 - Full production speed < 120 meters









Comexi/Sun Chemical/ESI

- Electron-Beam Cured Inks
 WETFLEX (UniQure)
 - Wet-trapped on a CI press configuration
 - Cured instantly with EB curing unit
 - No inter-station drying/curing needed
 - No VOC's
 - Can be washed up with hot water











Drent-Goebel VSOP

- Variable Sleeve Offset Press
 - Variable repeat sleeves
 - Web widths of 520, 850, & 1,250 mm
 - Low cost image carriers
 - Quick changeovers
 - Variety of ink systems (UV, EB, etc.)
 - Hybrid Options
 - Flexo, screen, gravure, digital, foil stamping
 - In-line converting options

Drent GOEBEL





On-line Monitoring/Measuring Systems

Defect Detection Color Measurement Integration with presses for presetting Overall Quality Assurance



On-line Monitoring/Measuring

Advanced Vision Technology

- InterPro
- pRegister
- Presco pressure control
 - Automated registration and impression setting
 - < 175 meters of substrate</p>
 - < 3 minutes
- PrintVision/Helios II
 - For label and narrow web markets
 - Similar inspection features
 - UV Inspection Module detects clear UV coatings
 - Braille Inspection Technology
 - JobRef
 - Compares on-press to pre-press digital PDF file





On-line Monitoring/Measuring

BST ProMark

- Premius digital3Chip _
 - 4.2 megapixel resolution •
 - 300% higher than any other camera _

Premius digital

- Can detect almost invisible defects _
- 4X faster and 4X more material inspected ۰
- More sensitive color monitoring •









Digital Printing

Speed Enhancements Increasing Format Size Multiple "Colorant" Technologies Increased Substrate Capabilities



Digital Printing

• Agfa :Dotrix Modular

- UV Inkjet technology
- 300 dpi resolution
- 25.6" max web width
- Unlimited repeat length
- 0.001" to 0.400" thickness range
- 78.7 fpm max speed
- 4-color process
- In-line printing/coating, slitting & diecutting
- Substrate pre-treatment (Corona)
- :Dotrix Ink Jet Press
 - Single pass full color inkjet
 - 24.8" printing width
 - 78.7 ft/min printing speed
 - 9,763 ft²/hr
 - Fits in converting process
- Industrial applications
 - PoP, Display & Signs
 - Packaging & Label
 - Flexible Packaging
 - Speciality printing
- Transactional printing & Direct mail
- Newspapers









Run Length



Configurations

















Coating + Varnish



Converting



Dotrix Modular markets





Digital Printing

• HP Indigo WS6000 & 6000

- Electrophotography
- Liquid pigment-based inks
- 7-color capability
 - PANTONE Licensed Inks
 - PANTONE Emulation Technology
- 812 and 1219 dpi resolution @ 8-bits
- 12.48" x 38.58" format size
- 0.047" 0.177" thickness range
- 98 fpm in 4-color mode
- 196 fpm in 1 or 2-color mode
- Can be equipped with a variety of coating and converting equipment in-line
- 13" Wide Web
- 7 Color
 - 4c, 6c, 7c process
 - PMS, Match Spot Colors (no Metallics)
- Net Print Speed 100 fpm 4c process; 200' fpm 1 or 2 color
- Multiple Hit (bump plate) capability
- 12 micron to 18pt media range
- Film, Foil, Paper, Tag, PS
- Variable data printing/anti-counterfeit
- Match conventional print processes
 - Flexo
 - Rotary Offset
 - Gravure
 - Screen
- Indigo proofing unit













WW Narrow Web/Digital Install Base – 2005 Pira Study





WW Narrow Web/Digital Annual Installations – 2005 Pira Study



■ Nilpeter ■ Gallus ■ Indigo □ Mark Andy ■ Focus ■ Edale ■ MPS □ Xeikon ■ Aquaflex



Digital Printing

• Xeikon 3300

- Dry Toner Electrophotography
- CMYK with 5th color station
- 1200 x 3600 dpi resolution
 @ 4 bits per spot
- 13" max web width
- Unlimited repeat length
- Compatibility with wide range of substrates
- 19.2 m/min web speed
- In-line options including UV flexo varnish, slitting, diecutting, foil stamping, lamination, etc.







Xeikon 3300 and 3000

- Proven LED-array based dry toner electrophotographic process
- Full rotary process:
 - No limitation in repeat
- Unbeaten print media flexibility :
 - format, weight, type
 - no coating or pre-treatment needed
- Roll-to-roll or roll-to-convertor
- Powerful X-800 DFE







Digital/conventional - label/packaging jobs by run length



*for conventional presses figure includes all responses under 1,000

**for digital presses includes all responses 100K and higher



Trends in label/packaging printing - NA

Printing process	Percentage
Flexo	92.3
UV flexo	66.4
Digital printing	47.3
Hot & cold foiling	46.6
Screen process	44.3
Combination printing	35.1
Offset lith	32.8
Letterpress	22.9
Gravure	8.4

"The best digital... converters are now amongst the more profitable of label converters."

XEIKON

(Labels & Labeling market survey, summer 2006)



Xeikon 3000 vs. Xeikon 3300 - product positioning

3300

- Digital label printing @ highest quality and speed
- Preferred solution for label converting to D-coat
- High monthly capacity
- Lowest cost per capacity

3000

- Dedicated applications @ highest quality:
 - Paperboard
 - Transfer
 - Start-up digital label printing
- Capacity is not main requirement
- Upgrade to higher speed of 3300 possible in the field





Plate Imaging

Digital Flexo Mask Ablation Advances Direct Engraving No conventional (chemical) processing Alternate Digital Imaging Techniques Approaches without use of carbon mask In-The-Round Imaging



Plate Imaging

MacDermid Direct Write

- New plate design
 - No carbon mask
 - Photosensitive to UV light
- New violet laser technology (405 nm)
- Faster imaging
 - No main exposure afterwards
 - Laser is the main exposure
- Lower cost platemaking (~25%)





Existing Flexo CTP

- Optimized for newspaper flexo
 - Flatbed configuration
 - UV exposure and imaging
 - 165 310 ft²/hr (9.3 -28.8 m²/hr)
 - 1270 dpi resolution
 - Only 10-15 mils relief
 - Material limitations











Plate Imaging

• Hell Premium Flexo

- Direct Engraving of elastomer sleeves
- Full automation
 - Including material handling
- No chemical processing
- Digitally Controlled 3D Profiling
 - Allows for unique halftone dot profiles
 - Improved print fidelity









Chemical Processing Analog

Kodak













Dupont ITR FAST Processor

Clam Shell Shaft to take any sleeve repeat size Surface point of "polymer removable" always constant Load & Unload from same side Sleeve size max. 1.7 m Speed dependent on depth of sleeve floor Available 2009

Cyrel[®] Fast Round





Plate Imaging

• EskoArtwork

- CDI Advance Cantilever
 - Can image both sleeves and flat plates (via loading table)
 - Optics 80
 - 8.0 m²/hr 19 minutes per plate
 - In-line UV Main Exposure
 - Simultaneous with ablation
- CDI 4835, 4260 and 5080 Fully AutoMatic PlateMaker
 - Auto Load
 - Imaging
 - UV Main Exposure
 - Simultaneous with ablation
 - Back Exposure
 - Auto UnLoad to processor later 2009
- CDI Gallus "Screeny" plate making
- New Screening programs
- Digital Flexo Suite Mounting Workflows
 - PostMount to Digital mounter
 - 3 Hole drill carrier and plates
 - PreMount plates before processing
 - Staggered layout mounting for Labels/Flexibles





CDI ADVANCE CANTILEVER

- Fastest Sleeve & Plate System
 - Automated tailstock for easy sleeve load and unload
 - Sleeve Drum for fastest changeover between Sleeve and Plate making
 - Inline-UV Main Exposure option
 - Pneumatic EasyClamp for drum
 - Automated door











- Simultaneous InLine UV main exposure during imaging
 - Main exposure 4 minutes vs. 10 minutes for bank exposure
 - High consistency = 0.01% 5080 sheet variance
 - No handling damage plate from CDI is ready for processing
 - Dot shape identical to standard DF dot from bank light
 - Controlled sales full release January 09







CDI SPARK AUTO



- PLATE FACTORY
- No manual intervention by the Operator
 - Fully automated plate loading
 - Automatic Unloading
 - Built-in Back exposure
 - Simultaneous Imaging & UV Exposure
 - Handover to processor later 2009

Press image for video





INCREASING customer's THROUGHPUT *without* MANUAL intervention of the operator

- Powerful and easy-to-handle automated workflow
- Reduced handling steps
- Significant error reduction
- Reduced labor cost
- Highest consistency from job to job (digital control)
- Less plate wastage
- Smaller Footprint
- More plates per hour



Perfect Highlights



- Uses a mixture of large and small dots to make a stable, printable highlight
- Transition point determined by operator
- Your individual, optimized screen will be created by our Color Excellence consultants







PlatePatcher & Merge – Digital Workflow Solutions

- Various Workflow options
- •For different tasks and markets
- Repetitious jobs can be automated
- •Reliable and Consistent results





Digital Flexo Suite – DFS for Corrugated





PlatePatcher/CDI/Table – Plot and Cut workflow



ready for press



PlatePatcher/CDI/Table – Digital Post Mounting workflow



ready for press



PlatePatcher/CDI/Table - 3-Hole Drill workflow





PlatePatcher/Table/CDI – Pre Mount workflow





PlatePatcher/CDI/Table – Staggered Cut workflow







Theme 2008 "Digital Control"

Questions ?

NEXT DRUPA 3-16 May 2012

Ian.Hole@ESKO.com





