



Utilizing Printer Measurement Inline Measurement

Presented by:

Agenda

Manufacturers Implement Variety of Instruments

- ◆ Attempt to review the different types of instrumentation
- ◆ Requires more than just an instrument
- ◆ Policies valid as of today, may change without notice
- ◆ Ideally should be spectrophotometer
 - ◆ Densitometer not much benefit
- ◆ Needs to be able to auto export the data in standard form
 - ◆ Include meta data, job, reference, patch definitions
- ◆ Ideally allows for customized Color bar to support G7 gray finders
 - ◆ Allows for G7 curve iteration without dedicated press runs

Industry Survey on LinkedIn in December

28 Respondents

- ◆ Respondents stated
 - ◆ 2 Print Manufacture owns the data
 - ◆ 26 Printer/Print Buyer owns the data

- ◆ Print Manufacturers answered the survey
- ◆ 7% Press Manufacture owns
- ◆ 82% Printer owns
- ◆ 11% Customer (Print buyer) owns

Types of Printing Devices

Wide Variety of Printing devices

- ◆ Proofing Devices
 - ◆ Epson, HP
- ◆ Digital Printing Devices
 - ◆ Canon, Epson, HP, Konica Minolta, Ricoh, Xerox
- ◆ Sheetfed & Web Printing Devices
 - ◆ Heidelberg, KBA, Komori, Manroland sheetfed, Manroland web, RGMT, AVT, Quadtech
 - ◆ X-Rite ITX, Techkon SpectroDrive, KM Myiro1 Scan
- ◆ Other, Flexography, Gravure
 - ◆ Third party instrumentation: X-Rite, Techkon, Veoria

Proofers

RIP Controls Inline Instrument

- ◆ Epson's with X-Rite SpectroProofer instrument (X-rite ILS)
- ◆ RIP defines control strip, when it measures, where measurement go
- ◆ EFI, GMG, CGS-Oris, PrintFactory all support Spectroproofer
 - ◆ All can export measurement data to a directory
- ◆ Some don't export data differentiate Print Condition (Coated, UNC)

Digital Presses - Narrow Format

HP Indigo, KonicaMinolta, Xerox

- ◆ HP Indigo: Series 4 and higher
- ◆ Konica Minolta
- ◆ Xerox MFP

HP Indigo Press using Color Beat

RIP Controls the Measurement Device

- ◆ Available with Indigo Series 4 or higher printers
 - ◆ Based on Spectrophotometer: X-Rite ILS Instrument
- ◆ Printer owns the data
- ◆ API sends data from PrintOS to ChromaChecker
- ◆ Control strip choice is limited, but does support CC H-100 which allows instrument to instrument compensation
- ◆ API allows job data to automatically upload to ChromaChecker

Konica Minolta

RIP Controls the Measurement Device

- ◆ Different Spectros based on printer type
 - ◆ Based on Spectrophotometer: IQ-501, IQ-520, IQ-600
- ◆ Supports multiple DFE's: Fiery, KM, Creo
- ◆ Can be auto exported, open format (CGATs)
- ◆ Customer owns measurement data
- ◆ No charge for measurement data
- ◆ Measurement can do quality analysis, inspect for image defects

Xerox MFP- VersaLink, PrimeLink, AltaLink

Using Scanner on Printer as Measurement device

- ◆ “ChromaCheck” App that is installed on Printer
 - ◆ Uses “Scanner to measure target
- ◆ Assess:
 - ◆ Operator Judgement
 - ◆ Defect detection
 - ◆ Within sheet variation
 - ◆ Between sheet variation
 - ◆ Accuracy to given reference
- ◆ Evaluating porting to other printers (Epson SureColor)

Xerox MFP- VersaLink, PrimeLink, AltaLink

Quick Demo Video

- ◆ Looking at offering to market

Digital Printers- Wide Format

Most Printers don't have any measurement option

◆ Epson SureColor

Sheetfed Printing Devices

Most Have In-line, or Near-line Measurement

- ◆ Heidelberg
- ◆ Komori
- ◆ KBA
- ◆ Manroland
- ◆ RMGT

Heidelberg

Multiple Systems: Axis, Image Control, Prinect

- ◆ Exports CGATs file
- ◆ Requires HB Quality Management Software: \$15,000
- ◆ Can not customize color bar, allows for one G7 gray patch
- ◆ With API Inline can export average CIE of CMYK per sheet

Komori

Multiple Systems: PDC-S1, S2, S3, SX

- ◆ Komori owns measurement data
- ◆ Exports SVF file or clf2
- ◆ No charge- define export directory, includes a lot of meta data
- ◆ Can customize color bar for PDC-S2 if you know X-Rite sw
- ◆ Can pay Komori to customize color bar

KBA

Presses Manufactured after 2013

- ◆ Exports XML (Open format)
- ◆ Ergotronic Color Control (ETCC), Ergotronic Color Drive (ETCD)
- ◆ Charge- define export directory
- ◆ No API support
- ◆ KBA owns the measurement data
- ◆ G7 Color bar standard, G7 Calibrated color bar...
- ◆ Can pay KBA to customize color bar

Manroland- Sheetfed

Presses Manufactured

- ◆ Exports XML
- ◆ Charge- define export directory

RMGT

Presses Manufactured after 2021

- ◆ Techkon Spectrophotometer
- ◆ Free export to defined directory

3rd Party Measurement Solutions

Can retrofit to most presses

- ◆ Techkon Spectrophotometer, X-Rite Intellitrax, MyiroScan
- ◆ All systems auto export to defined directory, no cost
- ◆ Closed Loop and Ink preset connections are available

Web Printing Equipment

Variety of 3rd party manufacturers

- ◆ AVT
- ◆ QuadTech
- ◆ ManRoland- Goss
- ◆ Veoria

AVT and Quadtech

3rd party Vendors that retrofit Web Presses

- ◆ Both can export spectral measurement data
- ◆ Export is dependent on manufacturer and your license
- ◆ AVT is not real time, exports after job is done
- ◆ Both are supported by ChromaChecker

Manroland- Web (Goss)

Different policies than Manroland Sheetfed

- ◆ Printer owns the measurement data
- ◆ Names: IDC, IDCm, IDCm plus, IDCmicro, ICSmart, ISC
- ◆ Can export spectral measurement data
- ◆ Fee is required for Export
- ◆ Color bar customization for fee
- ◆ Supported by ChromaChecker

Summary

Every Company has Different Policies

- ◆ Ideally, negotiate the export of the data during press negotiations
- ◆ Work with manufacture to get documentation
- ◆ This is future of quality control
- ◆ Some companies are more aggressive than others
- ◆ Best scenario would be to export PQX
 - ◆ Print Quality Exchange file