FACT SHEET

DISCOVERY Bindery
Automated Verification Solution for Bindery Processes

PRODUCT OVERVIEW

Today's bindery departments and service providers have a myriad of finishing equipment from guillotines and trimmers, folders and creasers, collators and booklet-makers to binders and laminators which gives them the flexibility to offer a wide range of finishing capabilities. Most of these require skilled personnel to precisely configure, setup and to constantly monitor, in order to ensure that a perfect booklet, catalogue, magazine or bounded document is produced every time.

However, when something goes wrong it can be both time consuming to trace the exact problem to a specific step or equipment, and very costly to reconfigure and set-up the various processing steps again to reproduce the work.

Common issues such as incorrect page sequencing, missing or duplicate pages and page orientation can easily occur due to operator errors in loading the equipment, and random mechanical faults such as misfeeds and jams, which intensify with suboptimal static electricity, temperature and humidity control.

Manual quality inspection procedures and checks can help to alleviate some of these problems for major integrity errors, but can be grossly inadequate for catching small or random errors which require more time and resources to investigate. With most finishing equipment operating at very high speeds and are heavily shielded for safety reasons, the operator has little chance of detecting an integrity error, while the equipment is running, until the job completes.

Finishing integrity errors can seriously impede operational productivity; resulting in equipment bottlenecks, more waste, missed delivery times, unsatisfied customers and potential loss of future business.

With many bindery factories facing increasingly low margins, short runs and even shorter lead times, the pressure is on to ensure that all equipment set-up errors or production faults are picked up immediately and corrected before the equipment is allowed to continue.

Automated Integrity Management for Bindery Equipment

DISCOVERY Bindery is the latest generation of finishing integrity management solutions from Lake Image Systems. Based on our industry leading DISCOVERY Multiscan platform, DISCOVERY Bindery captures images and/or data from a wide variety of camera and scanner technologies which are processed by a suite of DISCOVERY software tools to read, control, inspect, verify, log and report – providing 100% finishing integrity verification and control.

Sequencing, Missing and Duplicate Page Detection

Booklet signatures require the pages/signatures to be printed, cut and finished in a specific order. Therefore ensuring the correct base stock, tray or stack is load with the correct signature at every step is critical in maintaining the integrity of the booklet.

DISCOVERY Bindery provides powerful but simple to use, OCR and barcode reading and verification tools to read 1D/2D barcodes and other unique page markers, such as page numbers. During equipment setup, DISCOVERY Bindery checks that the correct base stock and tray is loaded and whilst in production verifies the correct page sequence, front and back matching and page count for each set. If the wrong tray or stock is loaded or if an out of sequence, front/back mismatch, missing or duplicate page is detected, DISCOVERY Bindery automatically issues an alarm and halt the equipment to allow further investigation. DISCOVERY Bindery also offers database look-up, matching and reconciliation capabilities for complex, variable cover/page booklet applications.

Multi-Pocket Stock Verification

Modern booklet makers can have up to 30 pockets that must be loaded with the correct signatures. DISCOVERY Bindery's Pocket Trainer tool offers a convenient, time-saving feature to set-up and load the input pockets. With the touch of the Train button, Pocket Trainer takes an image from each of the selected pockets at the same time and stores each as a trained object. During production, every signature in the pocket is checked against its corresponding trained object and a mismatch results in an error which will either divert the piece or stops the line.

Production Line Tracking, Logging and Error Reporting

DISCOVERY Bindery offers full ongoing production line tracking which enables integrity errors to the detected when they occur, preventing further loss in production. On-screen error reporting pin-points the location and nature of the error, helping the operator to correct the error quickly and efficiently, minimizing equipment downtime. A detail audit file is maintained which can be downloaded as a CSV file or imported into a factory control or MIS system.

READ & PRINT Inkjet personalization

For automated booklet personalization or addressing, DISCOVERY Bindery optionally provides an in-line READ & PRINT inkjet printing capability which can be mounted at the end of a booklet or polywrapping line.
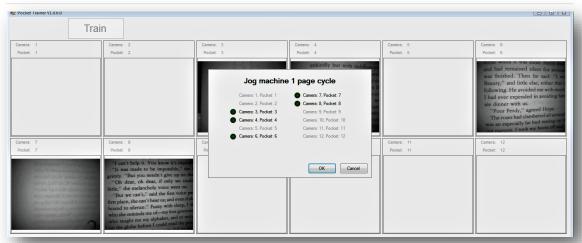
Intuitive Design – Quick Set-up & Adaptive Learning

System setup is quick and easy. An intelligent, barcode, OCR font or master image training mode are used to configure the job with minimal effort. DISCOVERY Bindery conditional processing capabilities enable the right set-up file to be selected, reducing operator error and improving production throughput and turnaround time.

DISCOVERY
MULTISCAN

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FEATURES

Variable Data Verification
- Full alphanumeric text reading & verification
- Verify 1D or 2D barcodes
- Barcode grading to ISO/ANSI standards
- Correct paper stock
- Presence / absence of text, logos & images
- X Y location, orientation & measurement.

Integrity
- Signature base stock verification
- Tray/pocket/stack/bundle verification
- Page sequencing verification
- Front/back matching
- Identify duplicate / missing items
- Collation control
- File look-up/matching against master data file/Database
- Full Text (IQ) database matching and logging.

Easily Set-up
- Supports most 1D, 2D, QRcode & postal barcodes and OCR text
- An intelligent, fast master image auto training
- Pocket Trainer for fast, efficient multi-input feeder set-up.

Control
- Operator light & audible alarms/warnings/device stop
- Marking & flagging device - Optional
- READ&PRINT Inkjet personalisation—— Optional.

Defect History / Tracking and Reporting
- Full production line tracking & reporting
- Full audit report of all print pieces and defects.

EQUIPMENT
- Collators, folders, stitchers, booklet makers & gathering lines
- Attachers & Inserters
- Continuous and cut sheet printers and presses.

APPLICATIONS
- Base stock/signature static verify & sequence verification
- Match verify for personalized booklets, exam papers etc.
- File audit/file look-up—reconciliation to print file/DB
- Read & Print with in-line Inkjet personalization & addressing.

SYSTEM
- Areascan cameras: MaxRead & GigE integrated Imaging modules
- Linescan cameras: up to 16K
- DISCOVERY Maxscan scanner (12", 24" & 36" lengths)
- Triggering: High resolution encoders
- Lighting: Long life L.E.D. Optional back-light.

Performance
- > 50 reads per second

Processor / Interface
- OS: Windows™ 7 (64bit)
- Chassis: Industrial rack
- Power: 110-230VAC
- Approvals: CE Certified
- Interface: Touch screen monitor, keyboard & mouse

Installation / Integration
- On finishing equipment or press mounting kits
- On site installation, testing & training.
- Remote technical support.

ADVANTAGES
- **Machine independent** - Can be retro-fitted to new & existing finishing and printing equipment
- **Reliable** - 100% web monitoring & defect reporting. Uninterrupted detection of integrity errors
- **Flexible** - Ability to deploy a broad set of camera and scanner technologies to capture a variety of integrity errors
- **User-Friendly** - Faster set-up & logical GUI layout
- **Upgradable** - Deploy multiple sophisticated DISCOVERY Tools, with conditional processing for complex error detection and variable data inspection
- **Supported** - Comprehensive maintenance contracts featuring remote diagnostics.

BENEFITS
- **Lower Costs** - Automatically detect integrity errors - preventing further loss in production, waste and costly rework
- **Improved Productivity** - Automate labour intensive and time consuming finishing equipment set-up & monitoring
- **Real-time tracking and error reporting** - for immediate and precise error detection and reporting to evidence production quality levels
- **Less Scrap / Less Waste** - Immediately prevent costly scrapping of large runs of defect print
- **Mitigate risks** - Ensure all jobs comply fully to customer requirements and industry / government regulations.