Innovations in Pack Proof

More accurate proofing of spot colors and overprints

Completely updated and modernized user interface (Color Pilot)
Accurate proofing of spot color overprints

Typical packaging jobs contain spot and process colors.
An accurate proof depends on predicting the spot color tones and overprints.
An accurate proof sets the right expectations with the customer and avoids rework or wasted time on press.

Pack Proof contains a scientific model for gravure and flexo printing. Predicts overprints and tones without expensive fingerprinting.
Completely updated user interface

- Modern look and feel
- Task driven “wizards” for common operations
- Dashboard and overview of proofing devices
- All functionality (proofing, Equinox, digital print) in one application

Color Pilot is easy to use, less training time and specialist knowledge needed. Less tweaking needed to get an accurate result
What customers say

- Yuncheng Plate-Making Co is the largest plate maker in Asia, with 75 sites producing rotogravure printing, embossing, die-cutting, hot stamping, soft rotogravure and ceramic cylinders as well as flexo plates.
- For gravure printers and trade shops, having a reliable color proof is extremely important, given the time and effort it takes to engrave a set of cylinders. During the prerelease of Pack Proof 16.1, Esko worked with Yuncheng to improve color accuracy of proofs, especially with regard to the overprinting of spot colors.
“Being able to rely on the proof is crucial, but what makes PackProof really unique is that it is entirely integrated into the Esko workflow, which we use every day to automate production”

- Yang Zhendong,
General Manager Yunan plant,
Yuncheng Plate-Making Co
Pack Proof: the integrated proofing solution

- Single color database for Esko platform
- Launch proofs directly from Automation Engine
- Feedback directly into the workflow
- Automation and consistent data saves time and avoids errors

- Integrated with Automation Engine
- Imaging powered by Adobe PDF Print Engine
- Quality proofs on paper and film
- Option to connect to PantoneLIVE cloud
- Patented Color Management

Integrated with Automation Engine
Pack Proof: the open proofing solution

Excellent proofing of spot colors, including overprints

Unique proofing of multi-color process MCPP

Supports a broad range of quality proofing papers

Quality packaging proofing at an affordable price
Backup slides

(if more product detail needed)
What is in 16.1.1 – in summary

- It includes:
  - A brand new, modern and easy to use interface: **Color Pilot**
  - Wizard driven interfaces for the most common color and proof tasks
  - Clear dashboard of proofing devices
  - Interfaces for Proofing, Digital Printing and Equinox all integrated in one application

- This makes setup of color and proofing **much simpler**

- In addition, 16.1.1 includes many improvements in color proofing algorithms
  - These improve proof quality and accuracy
  - They also make the process simpler, because manual adjustments to improve quality are no longer needed
Color Pilot 16.1.1

Unification in a single Color Pilot

Color Management for Digital Printing

(was part of Color Engine Pilot for HP presses)

Simplifies setup – just one application to learn and use
Color Pilot 16.1.1

Unification in a single Color Pilot Profile creation for presses

(was included in “Equinox Profile Creator”)

Simplifies setup – just one application to learn and use
Color Pilot 16.1.1

Unification in a single Color Pilot

Color Management for Proofing

(was part of the Classic “Kaleidoscope” Color Engine Pilot)

Simplifies setup – just one application to learn and use
Color Pilot 16.1.1

Complete redesign of the user interface
Simple look and feel
Dashboard overview of all devices

Simpler user experience – all information to hand
Color Pilot 16.1.1

Complete redesign of the user interface

Simple look and feel

History of Check and Recalibrate cycles on the proofer

Detailed metrics available

Simpler user experience – all information to hand
Pack Proof 16.1.1 > Complete redesign of the GUI > Wizards
Pack Proof 16.1.1 > Complete redesign of the GUI > Wizards
The Picker only shows the information that is needed.
Pack Proof 16.1.1 > Complete redesign of the GUI > Color Conversion options
Process inks versus spot-inks: a dual world

<table>
<thead>
<tr>
<th>Process inks</th>
<th>Spot inks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profiled by overprint charts like eci2002 or IT8.7/4</td>
<td>Profiled by single ink charts. Solid &amp; tints</td>
</tr>
<tr>
<td><img src="image1.png" alt="Process Inks Chart" /></td>
<td><img src="image2.png" alt="Spot Inks Chart" /></td>
</tr>
<tr>
<td>Interpolations in a table</td>
<td>A mathematical model describing the overprint behavior of your printing technique</td>
</tr>
</tbody>
</table>
How to calculate overprints of spot colors over process colors?

65%C + 40%Y + 10%K

65%Green

Spectral values

Unified profiles

Overprint model
How to make a device link from the 8 inks on the press to the 7 inks on the proofer?

- You need device links for fast conversion of millions of pixels.
- A device link is a table 8 inks → 7 inks
- An accurate device link needs 16 entries per channel → $16^8 = 4,294,967,296$ entries.

- Each entry needs 8+7=15 bytes
- A simple device link takes $4,294,967,296 \times 15 \text{ bytes} = 60 \text{ Gigabyte}$

Classical device links are slow to calculate and heavy to take in computer memory

The solution: Unified device links.
Pack Proof 16.1.1 > algorithmic improvements > generic linearizations

research was done to make the process of linearizing a proofer easier and the result better.

- better transition between light inks and saturated inks
- better way of detecting the Single ink limits
- better way of defining the Total Ink limit
Pack Proof 16.1.1 > algorithmic improvements > generic linearizations

Result is Generic linearization file

- The linearization files have names that start by v16-1
- different files for different resolutions, ink-sets and TAC
- Easy method to pick the right linearization file

The new files can be used with current software...

We wrote a knowledge base article

[KB185615059: How to install and use generic Esko EPL files?]