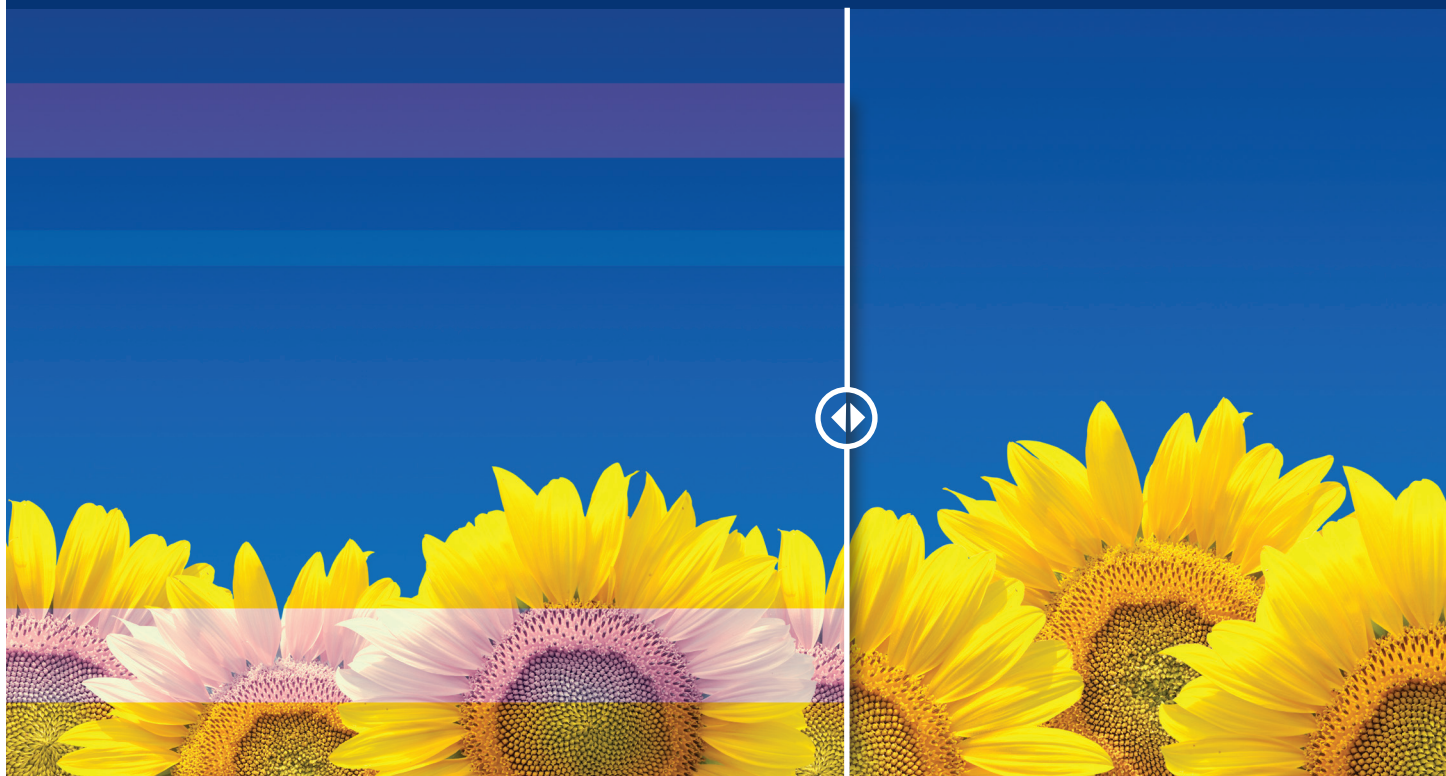




# Corrects inkjet non-uniformity across the web



Printflat corrects for density non-uniformity across the web, commonly caused by variation within a print head, between heads or wear on the head(s). These attributes result in banding on the printed output which is very difficult to correct for in hardware. PrintFlat can adjust the density within ScreenPro™ to produce uniform density across a print bar. The process can be automated for closed-loop correction and, unlike correction by adjustment of voltages, there is no effect on jetting stability or head lifetime, nor ink pressure and timing/drop speed variation.

## The problem of direction banding or stripes

If you're developing an inkjet press you'll know that the problem of non-uniformity or banding is a particularly difficult one to resolve. It's especially acute on areas of flat tints with the result that printed output is unacceptable to you and to your customers.

Left unresolved, it could prevent you from going to market with a new press. Out in the field this problem has a severe impact on your customers who can either not run certain jobs on their inkjet press or, in some sectors of the market, are forced to sell their output at a discount.

The good news is that with PrintFlat you and your users have a solution that is quick to deploy and cost-effective, and it can be applied to any workflow with or without a RIP.

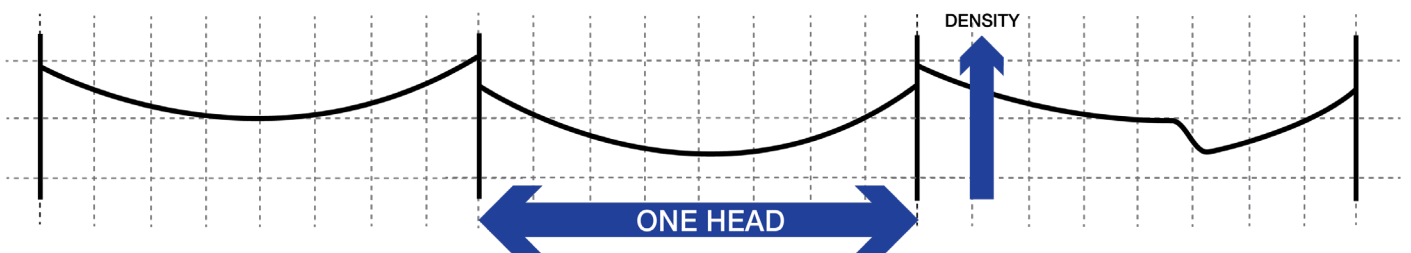
## How is it caused?

Banding is often referred to as the inkjet smile or frown and is due to variations in inkjet printheads. It is often caused by:

1. variation of ink pressure or voltage changes within a head, which typically results in a smile or frown shape.
2. manufacturing variation between heads, so that one may print lighter or darker than the head next to it in a print bar.
3. some types of heads can wear in use, resulting in less regular banding which can change over time.

## AT A GLANCE

- You can achieve very fine granularity
  - address every nozzle separately
  - on any head/electronics
- Results are almost instant once output is measured
  - can be automated for closed-loop correction
- Effective for single-pass and multi-pass applications
- Reduces development time and gets you to market quicker
- Each solution is specified to suit the individual press that it is driving based on measurements from that press
- PrintFlat doesn't affect
  - jetting stability or head lifetime
  - warranty compliance
  - ink pressure and timing/drop speed variation
  - ink coalescence on the substrate
  - halftoning



Variations in density within and between print heads

# REMOVES DIRECTIONAL NON-UNIFORMITY FROM INKJET OUTPUT

## HOW DOES PRINTFLAT WORK?

PrintFlat creates a customized calibration based on measurements from the press. It corrects tonality to hide banding. We called it PrintFlat because it removes banding, creating a "flat" uniform appearance on areas that are particularly difficult to print via the inkjet process, namely areas of flat colors.

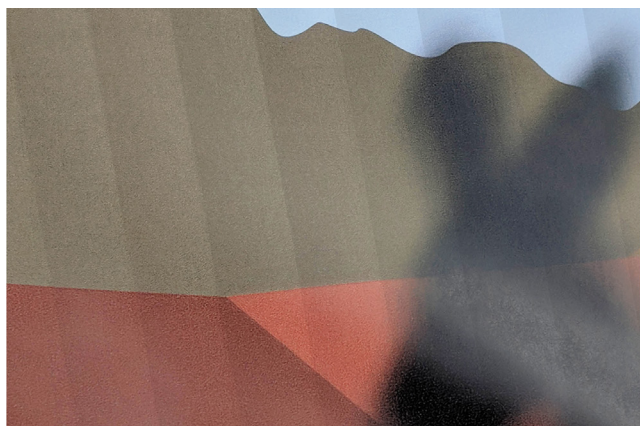
Your calibrations are installed into the ScreenPro™ screening engine which applies the correction to the press. ScreenPro can be applied to any workflow with any combination of printheads, inks, electronics, or other software choices that may have been made.



*Before*



*With PrintFlat*



*Before*



*With PrintFlat*

## TRIED AND TESTED

The development of PrintFlat began when several inkjet press vendors asked Global Graphics Software for help. They had exhausted possible mechanical improvements and were still dissatisfied with the results.

Working with more than a dozen vendors gave us plenty of press time to test different screening algorithms.

Contact [printflat@globalgraphics.com](mailto:printflat@globalgraphics.com) to view our book of samples showing before and after prints using PrintFlat across different printheads.

## Availability

PrintFlat is a software solution that is licensed to inkjet press manufacturers by Global Graphics Software and is already available through several printer vendors. There are no barriers to adoption because PrintFlat is workflow and RIP independent. PrintFlat mitigates banding on single pass as well as multi-pass devices. Contact [printflat@globalgraphics.com](mailto:printflat@globalgraphics.com) for more information.

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## Other screening solutions for inkjet

Advanced Inkjet Screens™ remove streaking and mottling on inkjet output. Tried and tested in the field, these screens will significantly improve output quality in 80% of cases. Use “Mirror” screens for non-absorbent media such as plastics or metal and use “Pearl” for absorbent substrates such as paper and board.

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## WORK WITH THE EXPERTS!

Global Graphics Software has a long history in screening innovation dating back to its patented FM or stochastic screening technology of the 1990s. With the advent of inkjet printing Global Graphics has developed new screening technologies in response to press manufacturers' concerns about image quality.

### OUR CUSTOMERS CHOOSE US BECAUSE:

- Our software is **technically superior** and **performs faster** than our competitors'
- We are **software innovators**
- We have a **flexible and open** commercial model
- We are easy to work with because we have a **partnership approach** to development
- We offer **superb technical support**

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[www.printflat.com](http://www.printflat.com)



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