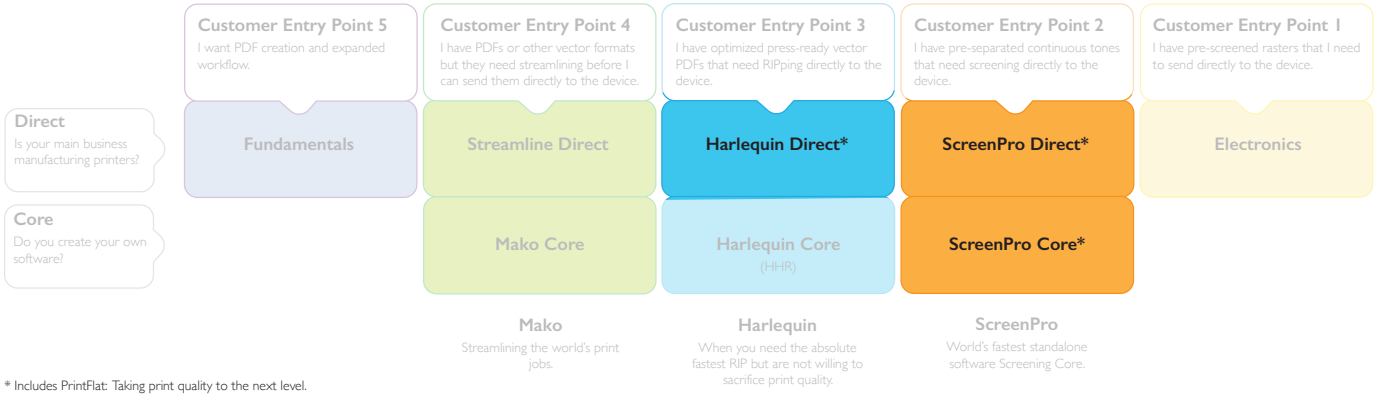
PrintFlat™

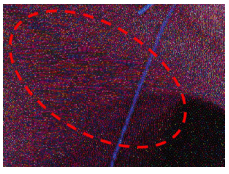
PrintFlat™ technology - taking print quality to the next level. Eager to maximize the quality of your output? Make those 'difficult' print jobs possible? Achieve higher quality in faster print modes to boost your productivity? Then add PrintFlat technology to your workflow today for outstanding image quality. PrintFlat technology is designed to boost printer sales and reduce support calls for OEMs by expanding the range of printable jobs and consistently achieving exceptional image quality.



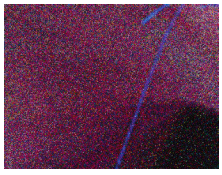
* Includes PrintFlat: Taking print quality to the next level.

QUALITY - why is screening important?

Screening determines output image quality in both binary (single drop size) and multi-level (several drop sizes) printing. Poor screening will introduce image artifacts, which are inherent to old generic screening algorithms, as well as accentuating print defects, highlighting issues such as mottle, chaining and streaking. Good screening will be free from artifacts and hide print defects, producing clean, natural-looking images with excellent reproduction of textures and detail.

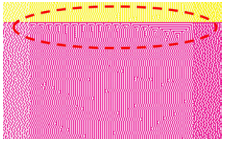


Standard error diffusion

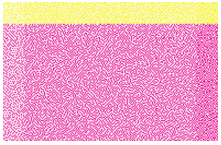


Global Graphics Software's unstructured screen

Screening-induced mottle is clearly visible with the standard error diffusion screen, but not present with Global Graphics Software's unstructured screen.



Standard error diffusion



Global Graphics Software's unstructured screen

An edge artifact is clearly visible with the standard error diffusion screen, but not present with Global Graphics Software's unstructured screen.

AIS screens – quality optimized screen set

AIS screens avoid all of the defects common with traditional screens - no tiling repeat patterns, moiré, worming/dot clustering, mottle, excessive noise, color convergence, etc.

Focused on mitigating artifacts in digital inkjet printing, AIS screens will showcase the quality achievable with your printer. The standard AIS screens are:

Mirror - designed with a micro-structure targeted at countering mottling or "orange peel", typically on non-absorbent or poorly wetting substrates, such as tin cans or some flexible packaging plastics.

Pearl - an advanced dispersed (FM) screen, targeted at addressing chaining and streaking artifacts on more or less absorbent substrates, by disrupting the directionality of those artifacts.

NEW Opal - a mid-tone clustered screen, achieving smoother print with some printhead types and reducing graininess.

AIS screens are applicable across a broad range of printers and printheads, and may be configured to the specific application requirements.

Custom screen design service

Evolving 25 years of Global Graphics screening excellence to address new digital inkjet markets, and when only the ultimate image quality will do, a custom screen can be developed to your exact printer specifications and application requirements via Global Graphics' Custom Screen Design Service. A custom screen can improve the look and feel of printed images, and be optimized for specific customer applications and/or aesthetic requirements.

UNIFORMITY - why is it a challenge for inkjet printing?

Inkjet printheads produce variable density output both across an individual printhead (known as the inkjet 'smile') and when comparing output from one printhead with another. The output from a printhead can also change with time, as the printhead wears or ages. Additionally, the overlapping stitch area between printheads in a single pass printer, or between overlapping passes in a multi-pass printer, can also cause density variations. Such variable density becomes visible in the printed output as 'banding' and 'stripes', and means that it is not possible for Print Providers to digitally print jobs with certain image features (such as flat areas or gradients).

In the printer design phase, the use of interlacing in the printing process can be effective at reducing banding and improving uniformity, but significantly impacts the speed and/or cost of the printer. Currently most OEMs attempt to correct uniformity issues with hardware solutions such as drive voltage tuning, but these give only limited improvement and are slow, complex and costly to implement.

Before PrintFlat is applied

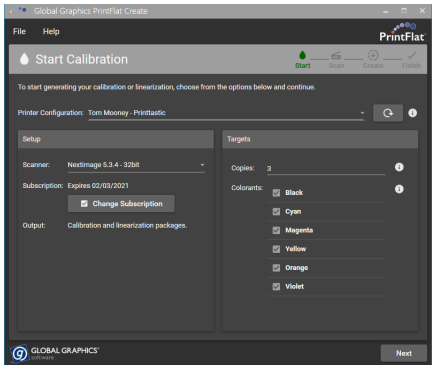
After PrintFlat is applied

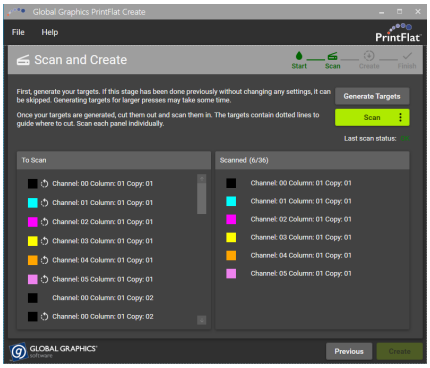
Instead, PrintFlat technology provides the ideal solution, giving smooth, uniform tints and accurate tone reproduction via a simple 'fingerprint' calibration of the screening process, where the density compensation is then built into the Screen halftone definition. This means that the PrintFlat calibration is applied during the screening process at runtime and enhances the quality of your output without any compromise on speed. The PrintFlat approach addresses every individual nozzle, has no negative effect on other printing parameters, and allows drive voltage to be used to maximize printing stability and reliability instead. PrintFlat can increase the added value of your service engineers' visits, producing a much higher quality result in less time. Alternatively, put the simple, operator-level PrintFlat calibration process in the hands of your customers and give them the power to maximize their output quality themselves.

PrintFlat™ Create – calibration generation tool

PrintFlat Create is a simple standalone application that guides the user through the calibration process, creating a 'fingerprint' calibration specific to their press. Highly versatile, PrintFlat technology supports grayscale and binary printheads, in single-pass and multi-pass inkjet printers.

Available as a Windows app, it comes with its own installer and license tool, and generates calibration and/or linearization files for use in ScreenPro™ and other Global Graphics software products. Customizable, PrintFlat Create is available as a white label application, ready for your branding, logo and styling.





GLOBAL GRAPHICS® software™

August 2020 v1

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