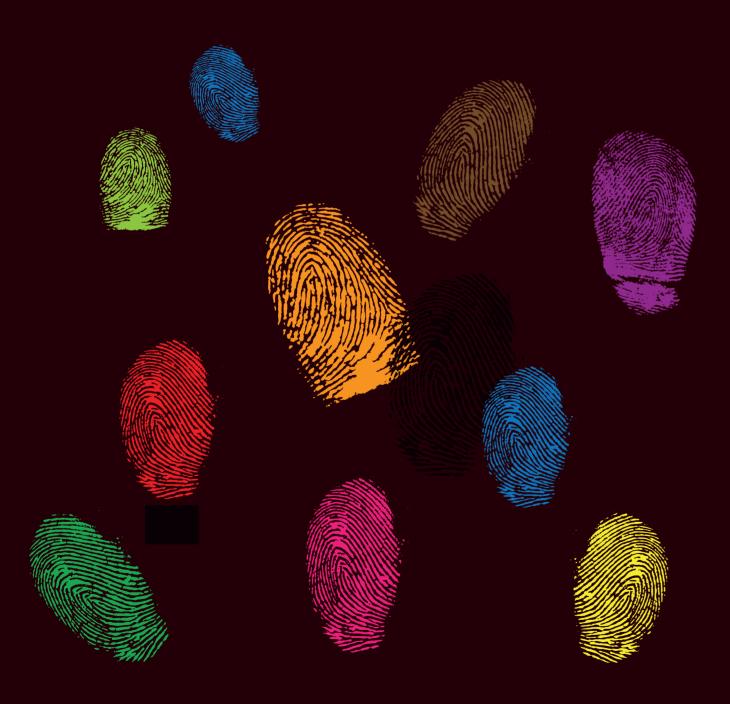# It's never been easier to create a unique profile.

GMG's smartProfiler: one year on.

At Print 09 a new era for GMG began. The company entered the digital printing world with a new product called GMG SmartProfiler: a new application, connected to GMG ColorServer, that would create GMG device link profiles and calibration files in a smart, easy, and revolutionary way.

From the beginning SmartProfiler has been a great success. Now all operators on digital printing devices, like toner or large format inkjet printers, have a solution to keep the printing process stable and synchronize their color over the whole site on all the printing devices involved.

Passing the Fogra media wedge on a toner based device? No problem!

Matching ISO Coated V2 on a large format UV printer? Easy! Even color management unskilled operators now have the tool to create high quality GMG profiles in a very short time.

New market, new challenges

The main reason for using GMG SmartProfiler in a digital or large format production environment is, next to the brilliant color conversion into the chosen standard, to achieve a reliable and consistent color reproduction.

Smart Profiler does the linearization, the calibration and the profiling on your devices… at the push of a button

During the first year of SmartProfiler we learned a lot on how to take into account the fact that print quality always reflects the quality of the weakest part on the output. Even though GMG SmartProfiler and GMG ColorServer will play an important part in the quality control, the achievable quality of all parts in the chain should be taken into consideration.
   One of the first things to consider is that high quality profiles can only be created for a printer in a good and stable

condition. Sounds quite simple, right? But this is sometimes a step that one forgets before one even starts. If we observe strong fluctuations, we need to find and fix the cause for the unwanted behavior on the machine. Our printer calibration is able to counterbalance normal deviations.
And then just get highest comparability to the standard of the output on all your connected devices

Does 'Consistent' mean better quality?

Yes and No.
If we want to achieve consistent colors on different printing systems, the quality is somehow limited by the weakest link in the system, of course. However, we know that a GMG ColorServer / SmartProfiler bundle can dramatically increase the print quality by flattening and normalizing documents and by applying high-quality color management.

To get an idea of what we are talking about, here is a short summary of what is possible:
• Avoid over inking
• Perfectly smooth gradients
• Print deep, dark color tones to bring out
• detail in the shadows
• Print bright and colorful images
• Avoid unintended tints or color drifts
• Align different Printing Technologies and substrates to a very comparable output result

However, there are technical limitations we should be aware of before starting to work with the software. For example, if the ink is running from the print medium, if a 'gradient' prints as a full tone, or if we observe very strong print artifacts, there is not much we can do about it by profiling alone. To save valuable time and resources, get into the habit of performing pre-checks of the printing system before starting the profiling and calibration creation process.

A pre-check for SmartProfiler should do the following:

• Confirm that the printing system is in general supported by GMG SmartProfiler
• Confirm that the printing system is in good shape and that it will be possible to achieve a good printing quality on the system
• Confirm that the settings of the front end RIP are compatible with SmartProfiler

As mentioned, Smart Profiler is able to handle Linearization, Calibration and Color Profiling.

How to handle printer linearizations: A printer linearization serves to control a printer in a way that the printed colors behave linearly to the input colors (of the original image file). In all front ends and rips on the market are tools to create and optimize such a linearization. Some printing devices have internal measurement devices to perform such a linearization fast and secure. Switching it all off and doing all the settings inside of the SmartProfiler will not work generally. You can either use the printer linearization used in the printer front end or you can create a new linearization in SmartProfiler. If you observe over-inking in one of the following steps, you will need to create a linearization. If you are unsure whether you need a linearization or not, it is recommended to create one; it will not be a problem to have a double linearization in your print workflow. In this step, a look-up table will be generated describing which color values need to be sent to the printer to achieve a linear relationship between input and output colors and to avoid over inking. The printer linearization is part of an MX3 printer calibration file that will be generated by SmartProfiler in the Create New Printer-Medium Combination mode. If you want to use the printer linearization from the printer front end, select 'None' and click 'Next' to proceed to the Full Gamut step. Otherwise, select 'Create New' and click 'Next' to create a new printer linearization.

Written by Steffen Raeuchle and Juergen Seitz of GMG

GMG SmartProfiler is now one year old and we would like to ask users of the software for their opinion: Is there anything that you are missing within this tool? Where do you see the opportunities to further improve that product?

email your suggestions to info@ gmgcolor.com