Concept of GMG Color Management

The concept of Color Management is to enable its client to setup their prepress, proofing and printing based on ISO 12647-2/3 specifications and ensures that different presses print the same.

ISO 12647-2:2007 has established the necessary parameters to enable proof and print to match by defining paper categories and their colorimetric values, L*a*b* reference values for primary and secondary process colors, correct dot gain values for the press, and maximum/minimum dot, as well as many other parameters.

Standardized printing helps reduce cost by achieving identical color rendering on all printing presses, in order to guarantee optimum flexibility and load distribution among the available press. Also helps in cutting cost through eliminating color management on press during proof matching.

Standardizing provides benefits as mentioned below

1. Increase in print quality.
2. Print repeat jobs quickly and reliably.
3. Avoid customer complaints.
4. Makes the production environmentally friendly by reducing amount of paper waste and consumption.
5. Increase customer loyalty.

Below is the explanation for standardizing of a Sheet fed offset environment.

### Step 1: Printing Press standardization (Sheet fed ISO 39)

Now as a first step we analyze your printing conditions with reference to ISO parameters using GMG's software tool called **Print Control Pro**.

After our analysis of the print control pro test form, evaluated with linear plates (require a plate dot meter for the same) –

we recommend the right densities at which you can attain ISO recommended lab's for printing primaries C, M, Y, K and also for printing secondary's which is RGB with your paper and ink sets. (RGB is not a mandatory criteria in ISO specs but we recommend you

to attain certain recommended values to achieve the best trapping and get saturated colors in printing).
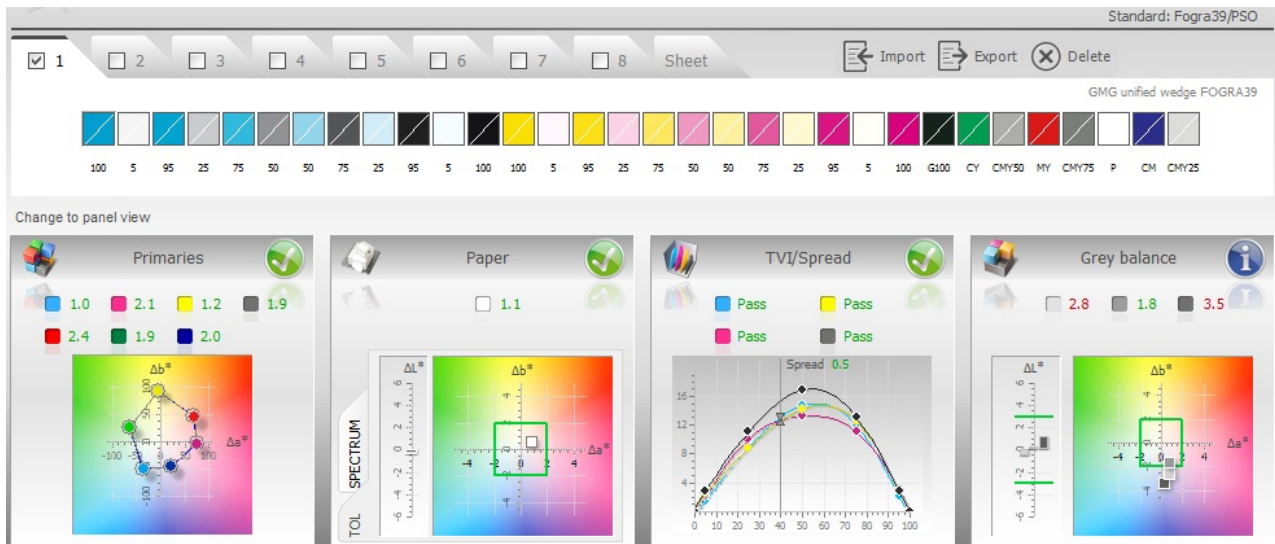
The software tool also recommends the dot gain compensation to be done in prepress RIP to ensure that your press prints within ISO specified dot gains. This also helps in making multiple presses to print with same tones.

Next is to set the gray balance with the help of same tool so that the gray in quarter tone, mid tone and three quarter tone as color values as in ISO specifications.
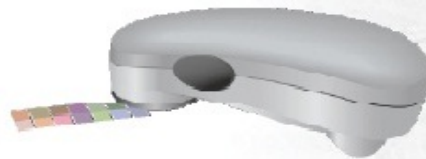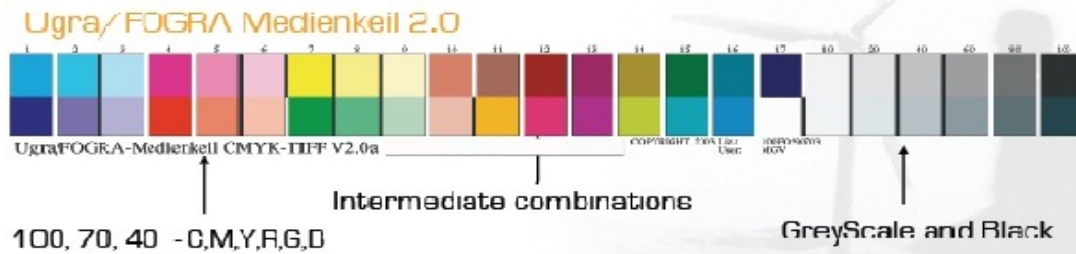

Once these are done you can be assured that your press is set to print on ISO standards.

To maintain these set standards we have a tool called **GMG rapid check** with which you can review on a daily basis whether your process is running based on the set specifications. One GMG strip printed on your press will give you complete report on what is the issue and the corrective measures to be taken.

We use the award winning GMG color proof solution to ensure that every proof that is generated within your prepress is based on ISO 39 specifications and certified as well.

The quality of the proof is verified and certified with proof control software. All GMG software's can be integrated to your existing third party workflow without any issues.

**Step 3: Separating and Ink optimization based on ISO 39/28/26.**

Then finally the prepress is set to separate and re-separate all incoming PDF/Tifs/EPS/JPG etc based on ISO 39 specifications with the GMG software called **GMG Color Server**.

Most people in graphic arts industry are no color management or PDF experts. Today nearly every application can create PDF files which results in a wide variety of PDFs with different versions and color spaces delivered to printers, repro houses, agencies and publishers. Checking and normalizing these files manually is a very time consuming process.

With GMG ColorServer and InkOptimizer we standardize and optimize fully automatically print files, independent from the printing process. The usage of the newest Adobe PDF

library guarantees a correct handling of all incoming PDF files which is the base for full productivity.

Most reliable color management requires to check incoming files for consistency. Using flattening ensures correct appearance of transparent or overprinting elements.
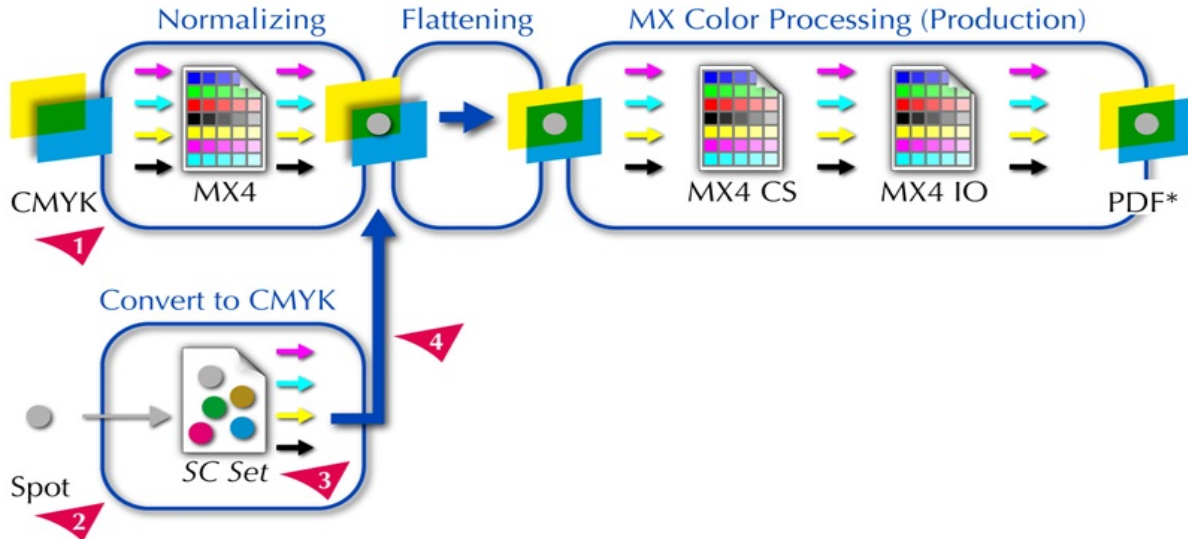
Similarly for commercial web we do separation/conversion to ISO 28 and for standard newsprint paper we follow ISO26 standard
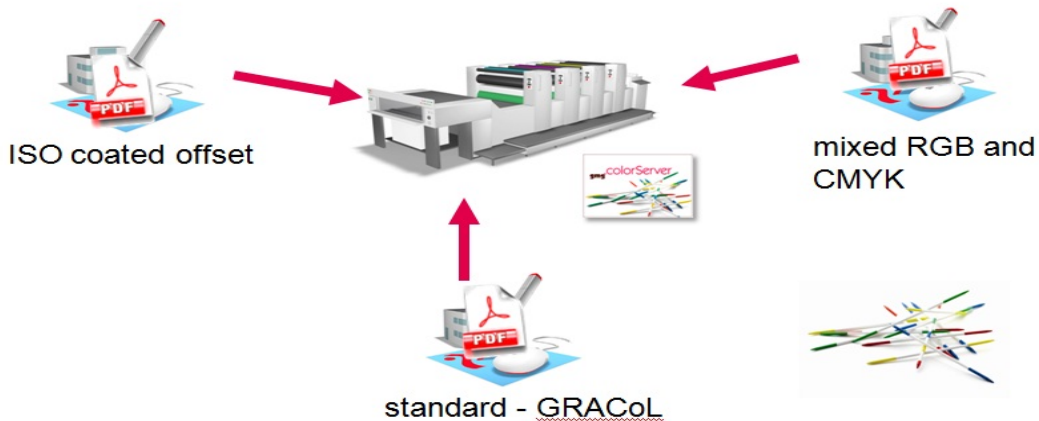
s.

Color server has much other excellent functionality in it. Now after proper re-separation/conversion/separation with color server we run the same files through **GMG Ink Optimizer** software. This software will remove all unwanted CMY from gray areas without affecting the colors. We are talking about less than 0.5 Delta E variations.

With this you have faster press make ready as the separation is done right and also when your printer prints at recommended densities he will reach the target proof generated from GMG on the actual press prints with minimum time. Also with the ink optimizer you save on inks by 12 to 15% on sheet fed and around 25% more on web. With less ink on the press you get better control on press, the grays are always gray and also less ink means less water and hence sharper dots, paper whiteness is maintained, faster drying and hence faster post-press activity on the job.

After you do all these procedures to bring in process control, it's almost impossible to have any more color issues.

So once your prepress, proof and press is set by right means on ISO specifications you can even apply for PSO certifications (Process Standard Offset) for which we can give consultancy as well through our authorized personnel's from GMG. You can also do periodic checks on your process with the help of GMG rapid check.