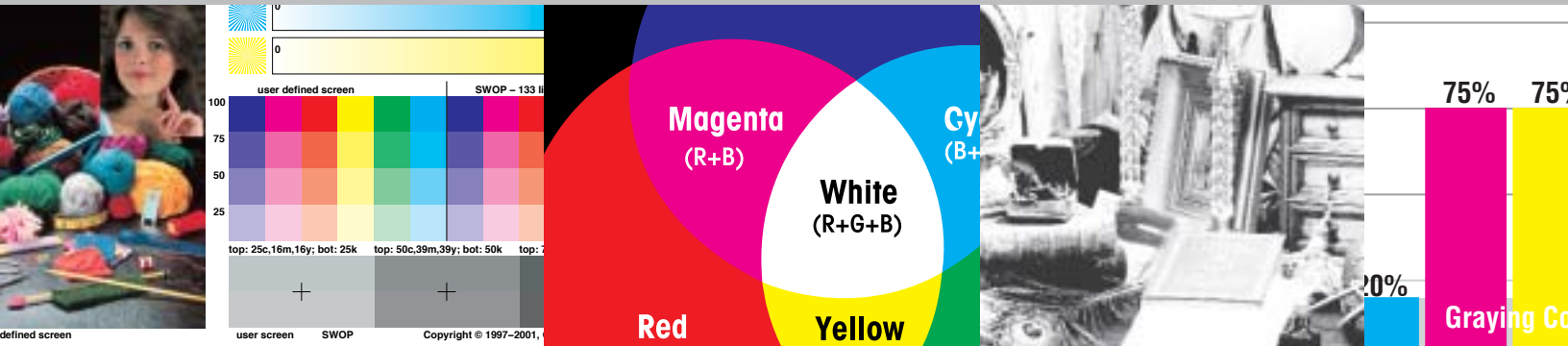




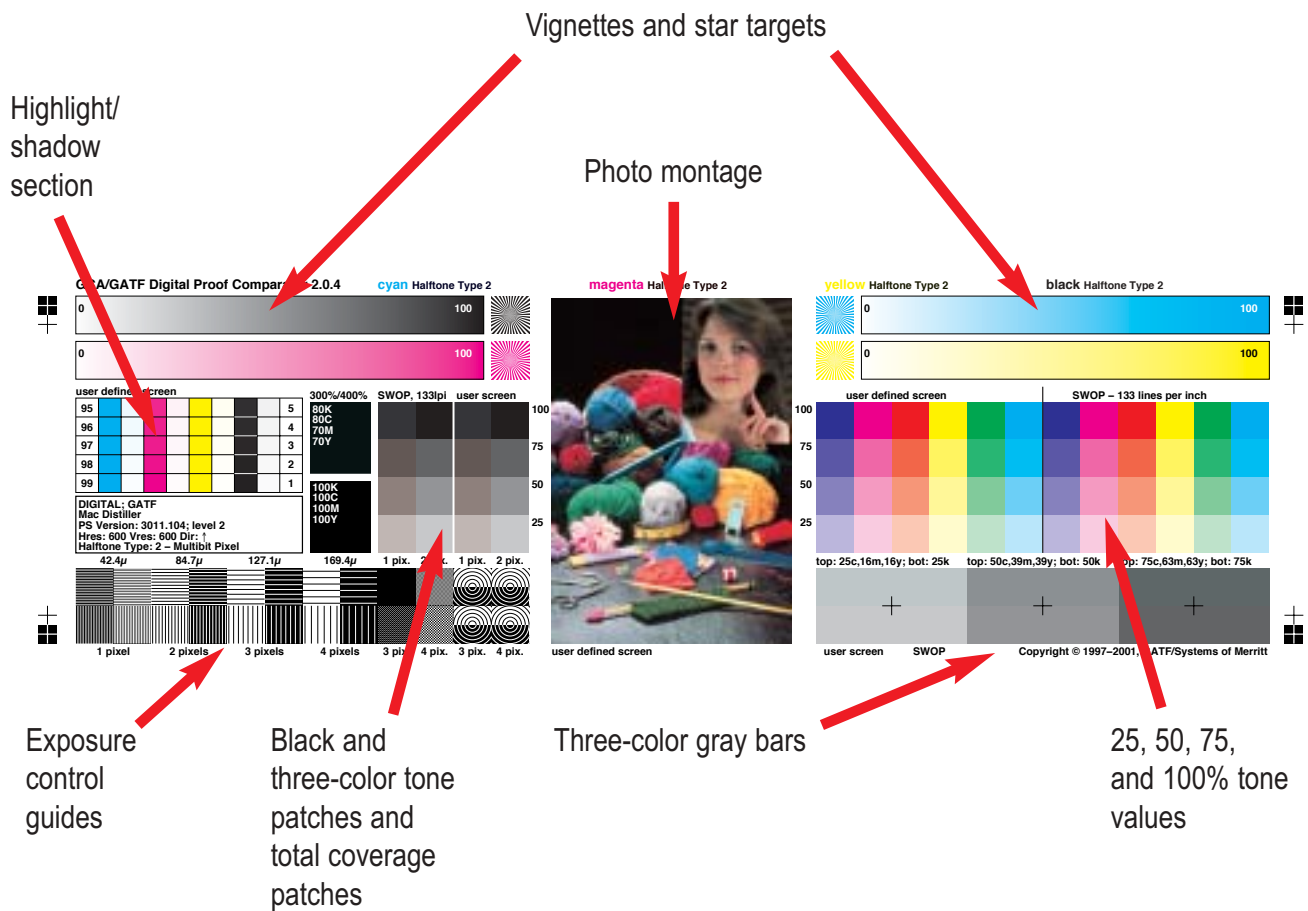
# Process Controls Reference Guide



Graphic Arts Technical Foundation  
200 Deer Run Road  
Sewickley, PA 15143  
1-800-910-GATF  
[www.gatf.org](http://www.gatf.org)

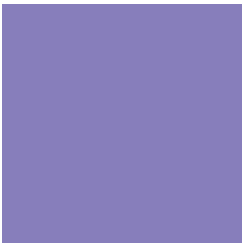
For questions or comments please contact:  
Dan Remaley ext. 450, [dremaley@gatf.org](mailto:dremaley@gatf.org)  
Joe Marin ext. 209, [jmarin@gatf.org](mailto:jmarin@gatf.org)

# GCA/GATF Digital Proof Comparator

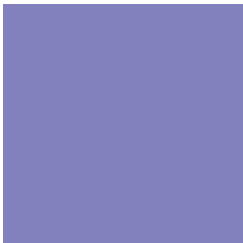




50M, 50C



52M, 50C



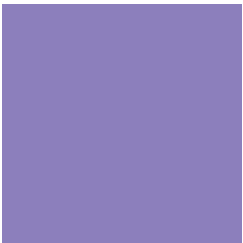
50M, 52C



50M, 48C



48M, 50C



52M, 48C



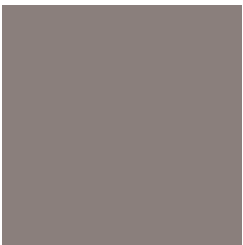
48M, 52C



52M, 52C



50C, 50M, 50Y



52C, 50M, 50Y



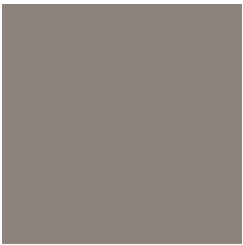
50C, 52M, 50Y



50C, 50M, 52Y



48C, 50M, 50Y



50C, 48M, 50Y



50C, 50M, 48Y



50C, 39M, 39Y



50C, 43M, 39Y

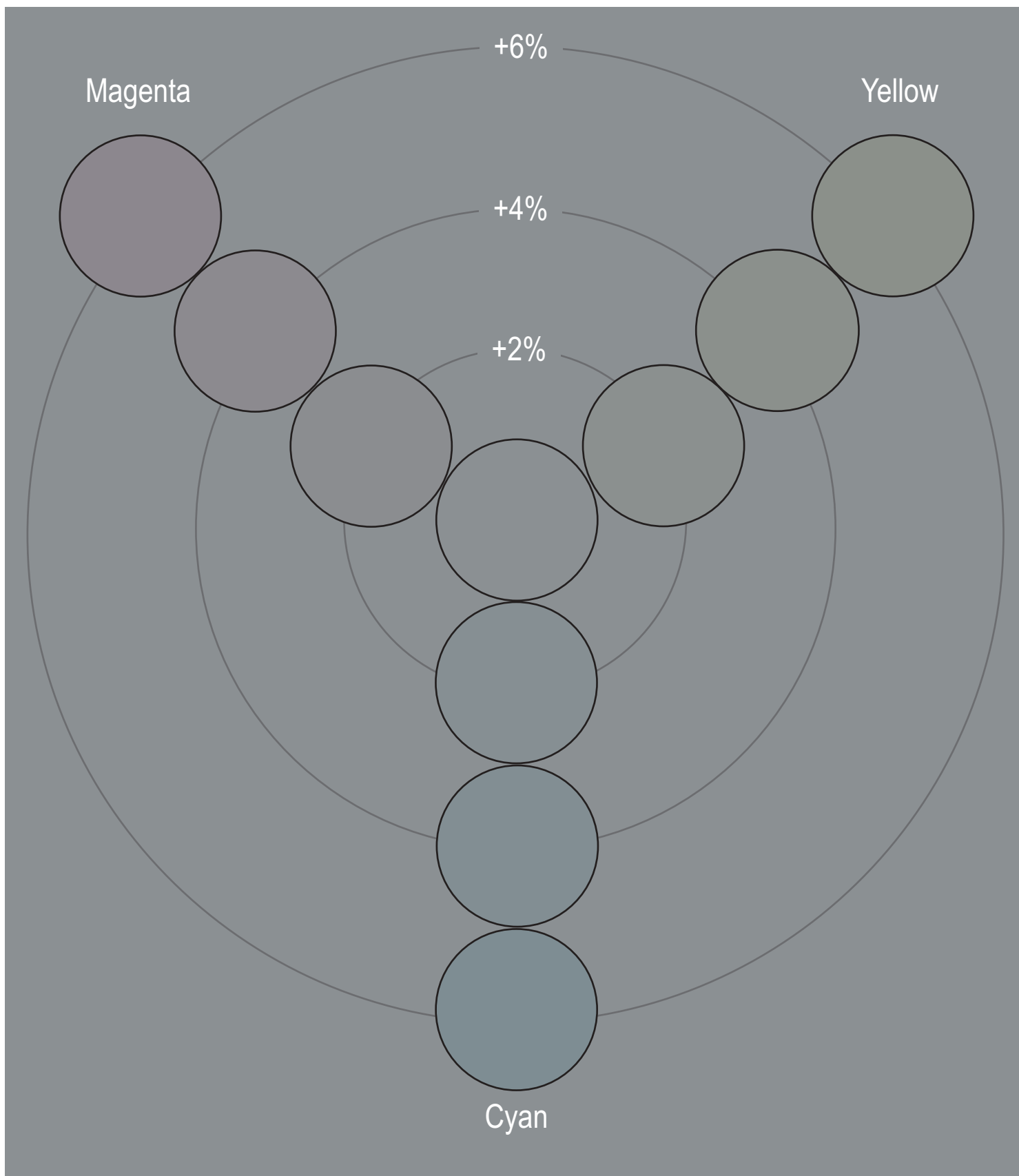


54C, 39M, 39Y

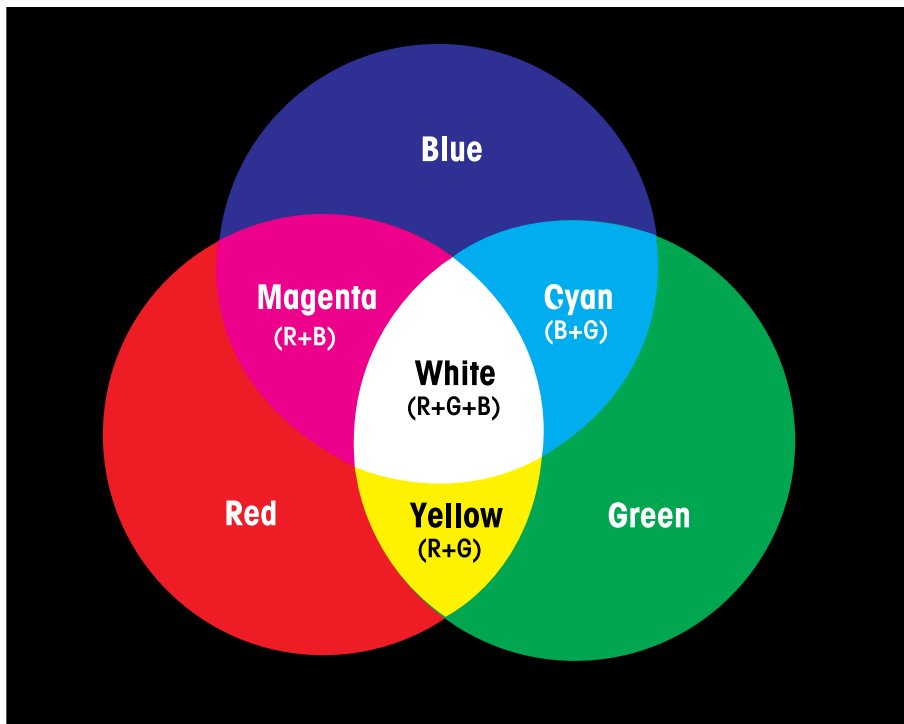


50C, 39M, 43Y

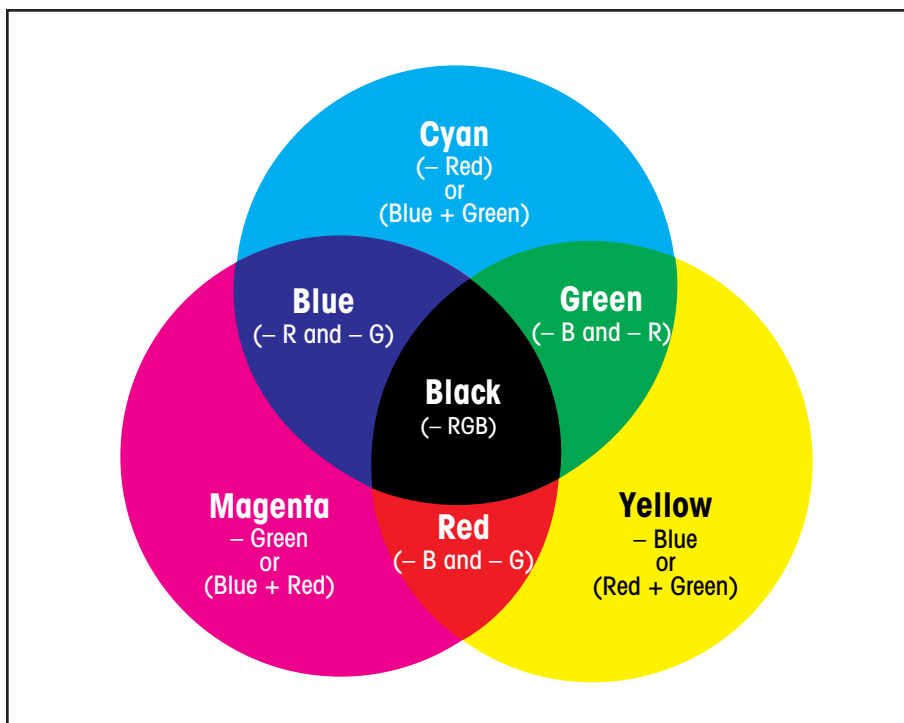
## Gray balance color shifts



## Additive color and subtractive color

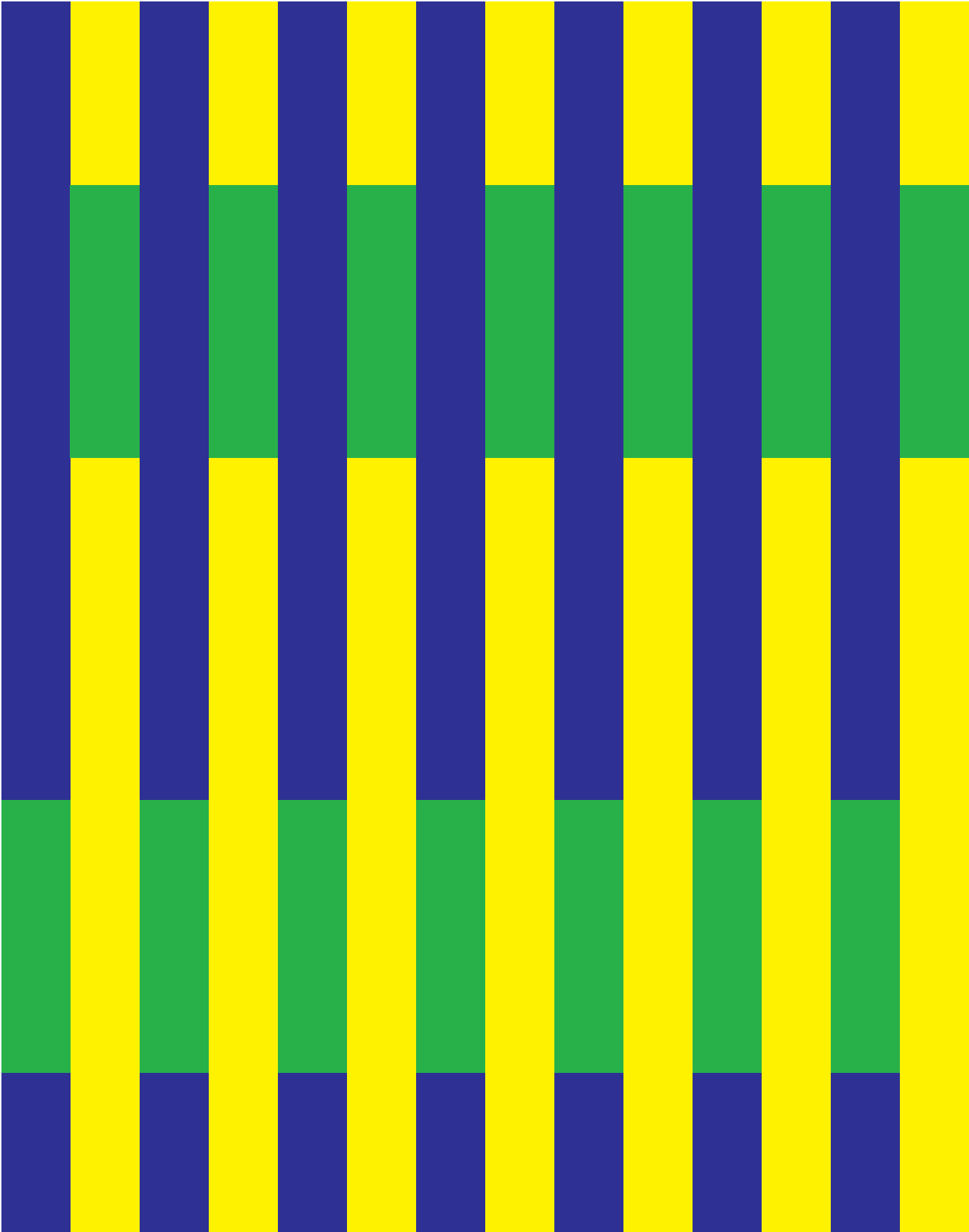


The additive color system starts with a black surround. Red, green, and blue light are the additive primaries, which when combined yield the secondary colors cyan, magenta, and yellow.



The subtractive color system starts with a white surround (paper). Cyan, magenta, and yellow (inks) are the subtractive primaries, which when combined yield the secondary colors red, green, and blue.

The effect of the surrounding color



The green bars appear to be different due to the influence of the surrounding colors.

## Gray balance adjustments



50% C  
43% M  
39% Y



50% C  
39% M  
39% Y



54% C  
39% M  
39% Y

## Contrast adjustments



54% C  
43% M  
43% Y



50% C  
39% M  
39% Y



46% C  
35% M  
35% Y

While differences in gray balance are very noticeable, differences in contrast are not.

**Conventional  
Separation**

**355% TIC**



4 Color Conventional



**UCR  
Separation**

**300% TIC**



4 Color with UCR



**GCR  
Separation**

**80% GCR  
300% TIC**



4 Color with GCR







3 Color Conventional



Conventional Black



3 Color with UCR



UCR Black



3 Color with GCR



GCR Black

## Results of gray component replacement on trichromatic colors



Results of GCR on trichromatic colors, showing (a) the CMY components of the color, (b) the results of 100% GCR, and (c) what happens when black is added, and (d) 50% GCR.

## Color shift comparison with UCR and GCR separations



Undercolor removal



Gray component replacement



Undercolor removal +5% magenta in midtones



Gray component replacement +5% magenta in midtones



# GATF Training Programs News

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## MAN Roland ROTOMAN Web Press to be Installed at GATF

A four-color, 16-page commercial web offset press will be installed at GATF in the first quarter of 2002 and be operational during the second quarter. The 65,000-copies-per-hour ROTOMAN will be equipped with Power Plate Loading (PPL), AC drive (no line shaft), the highly regarded PECOM control system, and 1:2:3 combination folder.

The new web press will enhance GATF's training and testing capabilities significantly.



## New GATF Training Programs

---

### Benchmarking Your Web Pressroom (2 Days)

Is your web pressroom operation the best it can be? How does your pressroom rank against the industry's best practitioners? Is there room for improvement? At this new workshop you'll learn how best to track specific performance measures, and you'll get at least five suggestions for boosting pressroom performance that you can put to use as soon as you return to the plant.

#### Workshop Fees

GATF/PIA Member	\$695
Nonmember	\$895

#### Workshop Dates

April 24–25, 2002 (Code G1120402)  
October 24–25, 2002 (Code G1121002)

### Slashing Makeready—Web (3 Days)

Exciting technologies being incorporated into web presses are sure to make an impact... the heatset web press of the future will be more energy efficient and more productive with shorter makereadies. So what are the "secrets" to slashing makeready on the web offset press? You'll learn in this new workshop.

#### Workshop Fees

GATF/PIA Member	\$795
Nonmember	\$995

#### Workshop Dates

November 6–8, 2002 (Code G1111102)

### Troubleshooting Web Offset Press Problems (3 Days)

So you want to be a web press expert? This is the workshop that could turn you into a web press "authority"... as you examine the top 20 web press problems, from streaking to excessive ink emulsification. These problems will be discussed and then demonstrated on GATF's new MAN Roland Rotoman web offset press. You'll learn the causes of each problem and what corrective actions to take.

#### Workshop Fees

GATF/PIA Member	\$795
Nonmember	\$995

#### Workshop Dates

October 30–November 1, 2002 (Code G1071002)

### Estimating, Scheduling, and Production Planning (3 Days)

This new workshop includes essential information on estimating, scheduling, and production planning and combines hand-on exercises with estimating theory, techniques, and tools. The use of MIS systems in today's workflow is covered, as well as development of budgeted hourly rates. Demonstrations will be held in the Bassemir and Kronenberg Paper and Ink Lab, plus the pressroom and bindery.

#### Workshop Fees

GATF/PIA Member	\$795
Nonmember	\$995

#### Workshop Dates

February 20–22, 2002 (Code G1130202)  
August 14–16, 2002 (Code G1130802)

**To sign up for a GATF training program, call 1-800-910-4283 today!**