

色彩管理技術在印刷上的應用

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課程大綱

1. 基礎色彩學

色彩本質: 光源, 眼睛, 物質

色彩溝通: RGB, CMYK, CIE lab

色彩設備: Capture (掃描, 拍攝), 顯示, 打樣, 印刷, 光源

What is ICC profile?

2. 色彩管理應用

色彩管理軟體介紹: ColorShop, ProfileMaker, ColorThink

工作平台: Mac, PC, Pinter Driver

應用軟體與色彩管理: Acrobat, Photoshop, Illustrator,

打樣: RIP, Printer Driver, 線性化, 軟打樣, 同色異譜

3. 標準化

ISO-12647-2,

灰色平衡

	Cyan	Magenta	Yellow
亮部	25%	19%	19%
中間調	50%	40%	40%
暗部	75%	64%	64%

銅版紙色度

紙張類型 1

$L^*/a^*/b^*$

Black 18/0/-1

Cyan 54/-37/-50

Magenta 47/75/-6

Yellow 88/-6/95

Red 48/65/45

Green 49/-65/30

Blue 26/22/-45

	Black	Cyan	Magenta	Yellow
上下色差寬容度	2	2.5	4	3
色差總差異數值	4	5	8	6

紙張類型	L*	a*	b*	Gloss	Brightness	Mass per area
單位				%	%	g/m ²
1.Gloss-coated wood-free	93	0	-3	65	85	115

Type 1 Paper 印刷濃度

	Status T	偏光鏡
C	1.52	1.66
M	1.47	1.61
Y	1.06	1.16
K	1.62	1.95

Ifra 評比系統介紹



Paper

L* = 80 or higher	1 point	
L* = less than 80	0 points	
a* = between 0 and 1	1 point	

a* = less than 0 or more than 1	0 points	
b* = between 0 and 4	1 point	
b* = less than 0 or more than 4	0 points	Maximum number of points3 points

Black

L* = 38 or lower	1 point	
L* = more than 38	0 points	
a* = between 0 and 1	1 point	
a* = less than 0 or more than 1	0 points	
b* = between 0 and 4	1 point	
b* = less than 0 or more than 4	0 points	Maximum number of points3 points
Gray Balance		

Light graybalance(C 10 / M 8 / Y 8) = Delta C* equal to or less than 1	5
Light graybalance(C 10 / M 8 / Y 8)= Delta C* equal to or more than 4	0
Medium graybalance(C 30 / M 24 / Y 24) = Delta C* equal to or less than 1	5
Medium graybalance(C 30 / M 24 / Y 24) = Delta C* equal to or more than 4	0
Dark graybalance(C 50 / M 42 / Y 42) = Delta C* equal to or less than 1	5
Dark graybalance(C 50 / M 42 / Y 42) = Delta C* equal to or more than 4	0
Maximum number of points	15

Color Space

Color	L*	a*	b*
Cyan	57	-23	-27
Magenta	54	44	-2
Yellow	78	-3	58
Green (Y + C)	53	-34	17
Blue (C + M)	41	7	-22
Red (M + Y)	52	41	25

以上印機控制佔 50 分

RGB-CMYK 轉換 50 分

整體影像品質 100 分

發行品質(版面分布,品質穩定度) 100分

蘋果日報成績分析

4. 從源頭解決色彩溝通問題