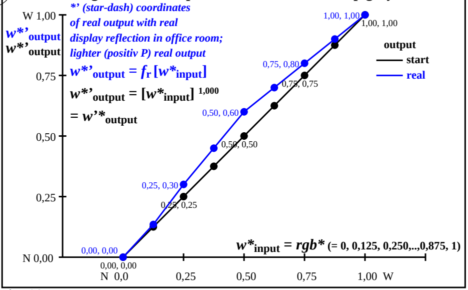
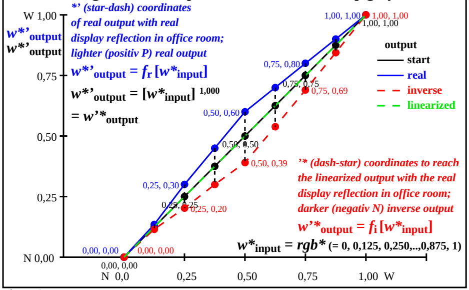
Colour management for output linearization of a 9 step grey scale



hem70-3n

Colour management for output linearization of a 9 step grey scale



hem71-3n

Three, 5 and 9 colour steps for visual evaluation

s: 0, 125, 250, 375, 500, 625, 750, 875, 1000
Gelb Y00w − Gelb Y16w = White W

$L^*_{TUBLOG,U}$=[50/log(5)] log(Y/Y_U)+50, Y_N=4, Y_U=20, Y_W=100

0,000	0,500	1,000
Y00w	Y08w	Y16w

0,000	0,250	0,500	0,750	1,000
Y00w	Y04w	Y08w	Y12w	Y16w

0,000	0,125	0,250	0,375	0,500	0,625	0,750	0,875	1,000
Y00w	Y02w	Y04w	Y06w	Y08w	Y10w	Y12w	Y14w	Y16w
0	12?	25?	37?	50?	62?	75?	87?	100

Three, 5 and 9 colour steps, numeric specification

0,00 0,00	e08=0, . . a1=e08	1,00 1,00

0,00 0,00	e04=0, . . b1=e04*a1	1,00 0,00 b2=a1	e48=0, . . b3=e48*(1−b2)+b2	1,00 1,00

0,00 0,00	e02=0, . . c1=e02*b1	1,00 0,00 c2=b1	c24=0, . . c3=e24*(b2−b1)+b1	0,00 1,00 c4=b2	e46=0, . . c5=e46*(b3−b2)+b2	1,00 0,00 c6=b3	e68=0, . . c7=e68*(1−b3)+b3	1,00 1,00

Three, 5 and 9 colour steps, numeric calculation example

0,00 0,000 0,000	0,60 0,600 0,390	1,00 1,000 1,000

0,00 0,000 0,000	0,50 0,300 0,202	1,00 0,00 0,600 0,390	0,50 0,800 0,690	1,00 1,000 1,000

0,00 0,000 0,000	0,45 0,135 0,115	1,00 0,00 0,300 0,202	0,50 0,450 0,299	0,00 1,00 0,600 0,390	0,50 0,700 0,538	1,00 0,00 0,800 0,690	0,49 0,900 0,844	1,00 1,000 1,000

r: 0, 135, 300, 450, 600, 700, 800, 900, 1000
i: 0, 115, 202, 299, 390, 538, 690, 844, 1000
Gelb Y00w − Gelb Y16w = White W

Three, 5 and 9 colour steps, produced visual linearization

$L^*_{TUBLOG,U}$=[50/log(5)] log(Y/Y_U)+50, Y_N=4, Y_U=20, Y_W=100

s	0,000	0,500	1,000
r	0,000	0,600	1,000
i	0,000	0,390	1,000
f	0,000	0,500	1,000
	Y00w	Y08w	Y16w

0,000	0,250	0,500	0,750	1,000
0,000	0,300	0,600	0,800	1,000
0,000	0,202	0,390	0,690	1,000
0,000	0,250	0,500	0,750	1,000
Y00w	Y04w	Y08w	Y12w	Y16w

0,000	0,125	0,250	0,375	0,500	0,625	0,750	0,875	1,000
0,000	0,135	0,300	0,450	0,600	0,700	0,800	0,900	1,000
0,000	0,115	0,202	0,299	0,390	0,538	0,690	0,844	1,000
0,000	0,125	0,250	0,375	0,500	0,625	0,750	0,875	1,000
Y00w	Y02w	Y04w	Y06w	Y08w	Y10w	Y12w	Y14w	Y16w

hem70-7n, Test samples: 3, 5 and 9 colour steps, greu=0,500, expu=1,000, expa=1,000, expi=1,000

TUB-test chart hem7; separate grey samples for visual intervall scaling, evaluation of the series
Y_W with 3, 5 and 9 steps, output (rgb*)1,0 & experimental; surround mean Grey U=N08w

see similar files of the whole serie: http://farbe.li.tu-berlin.de/hems.htm
technical information: http://farbe.li.tu-berlin.de or http://color.li.tu-berlin.de

TUB registration: 20241001-hem7/hem7l0n1.txt /.ps
application for evaluation and measurement of display or print output

TUB material: code=rha4ta