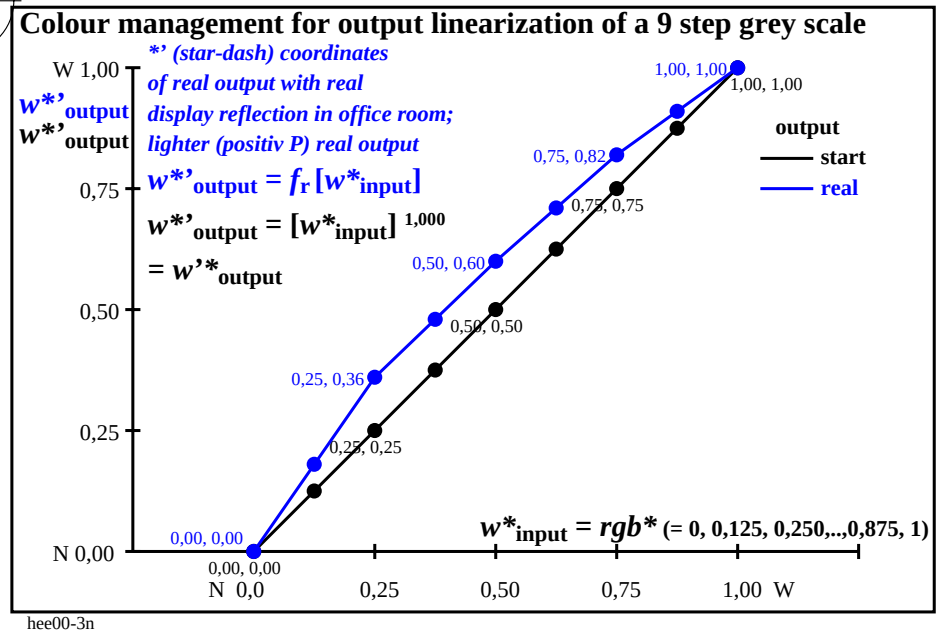
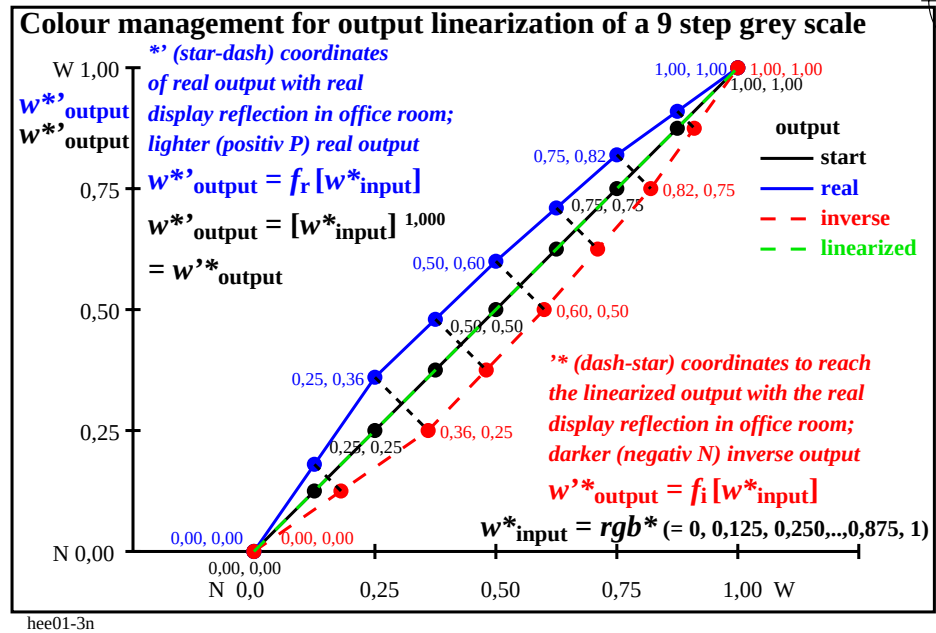
Colour management for output linearization of a 9 step grey scale



hee00-3n

Colour management for output linearization of a 9 step grey scale



hee01-3n

Three, 5 and 9 colour steps for visual evaluation

0, 125, 250, 375, 500, 625, 750, 875, 1000
Black N00w − Black N16w = 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	0,000	0,250	0,500	0,750	1,000	0,000	0,125	0,250	0,375	0,500	0,625	0,750	0,875	1,000
N00w	N08w	N16w	N00w	N04w	N08w	N12w	N16w	N00w	N02w	N04w	N06w	N08w	N10w	N12w	N14w	N16w
								0	12?	25?	37?	50?	62?	75?	87?	100

Three, 5 and 9 colour steps, numeric specification

0,00	e08=0, . .	1,00	0,00	e04=0, . .	1,00	e48=0, . .	1,00	0,00	e02=0, . .	1,00	c24=0, . .	0,00	e46=0, . .	1,00	e68=0, . .	1,00
0,00	a1=e08	1,00	0,00	b1=e04*a1	0,00	b2=a1	1,00	0,00	c1=e02*b1	0,00	c2=b1	1,00	c5=e46* (b3−b2)+b2	0,00	c7=e68* (1−b3)+b3	1,00
						b3=e48* (1−b2)+b2					c3=e24* (b2−b1)+b1			c6=b3		

Three, 5 and 9 colour steps, numeric calculation example

0,00	0,50	1,00	0,00	0,50	1,00	0,50	1,00	0,00	0,50	1,00	0,50	0,00	0,50	1,00	0,50	1,00
0,000	0,500	1,000	0,000	0,250	0,500	0,750	1,000	0,000	0,125	0,250	0,375	0,500	0,625	0,750	0,875	1,000

Three, 5 and 9 colour steps, produced visual linearization

0, 180, 360, 480, 600, 710, 820, 910, 1000
Black N00w − Black N16w = 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	0,000	0,250	0,500	0,750	1,000	0,000	0,125	0,250	0,375	0,500	0,625	0,750	0,875	1,000
N00w	N08w	N16w	N00w	N04w	N08w	N12w	N16w	N00w	N02w	N04w	N06w	N08w	N10w	N12w	N14w	N16w

hee00-7n, Test samples: 3, 5 and 9 colour steps, greu=0,500, expu=1,000, expa=1,000, expi=1,000

TUB-test chart hee0; Adjacent grey samples for visual intervall scaling, evaluation of the series N−W with 3, 5 and 9 steps, output $(rgb^*)^{1,0}$ & experimental; surround mean Grey U=N08w