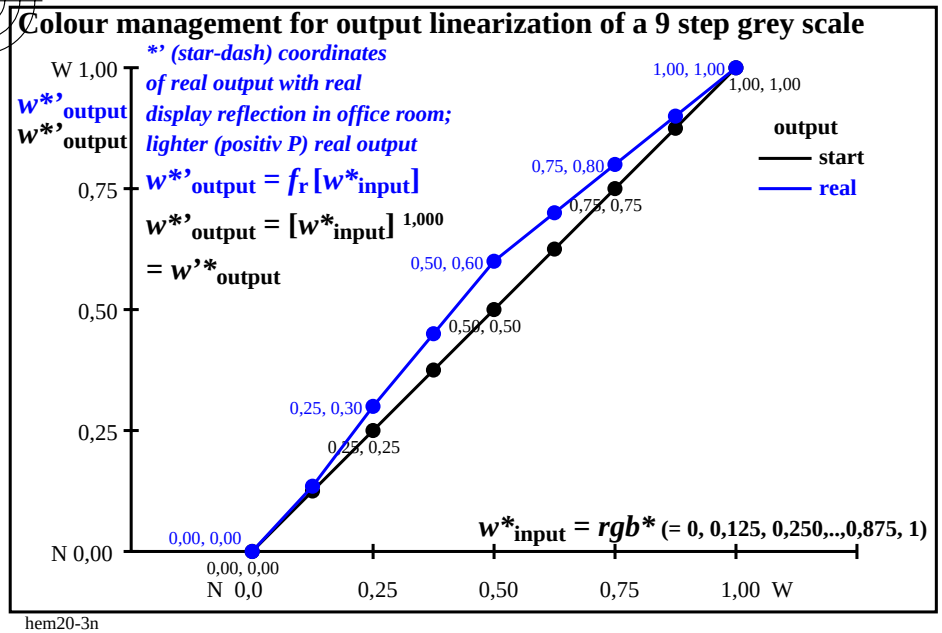
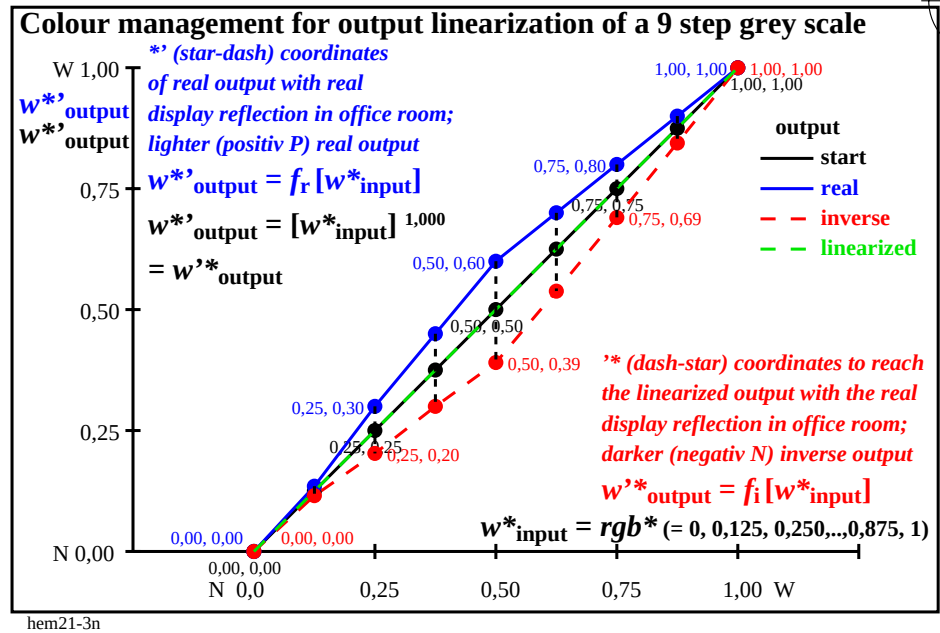
Colour management for output linearization of a 9 step grey scale



hem20-3n

Colour management for output linearization of a 9 step grey scale



hem21-3n

s: 0, 125, 250, 375, 500, 625, 750, 875, 1000 Magenta M00w − Magenta M16w = White W $L^*_{TUBLOG,U}=[50/\log(5)]\log(Y/Y_U)+50$, $Y_N=4$, $Y_U=20$, $Y_W=100$

Three, 5 and 9 colour steps for visual evaluation

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
M00w	M08w	M16w	M00w	M04w	M08w	M12w	M16w	M00w	M02w	M04w	M06w	M08w	M10w	M12w	M14w	M16w
								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			0,00	e02=0, . .	1,00		0,00		1,00		
0,00	a1=e08	1,00	0,00	b1=e04*a1	0,00	b2=a1	e48=0, . .	0,00	c1=e02*b1	0,00	c24=0, . .	1,00	e46=0, . .	0,00	e68=0, . .	1,00
					1,00		b3=e48*			c2=b1	c3=e24*	c4=b2	c5=e46*	c6=b3	c7=e68*	
							(1−b2)+b2				(b2−b1)+b1		(b3−b2)+b2		(1−b3)+b3	

Three, 5 and 9 colour steps, numeric calculation example

0,00	0,60	1,00	0,00	0,50	1,00			0,00	0,45	1,00		0,00		1,00		
0,000	0,600	1,000	0,000	0,300	0,600	0,800	1,000	0,000	0,135	0,300	0,450	0,600	0,700	0,800	0,900	1,000
0,000	0,390	1,000	0,000	0,202	0,390	0,690	1,000	0,000	0,115	0,202	0,299	0,390	0,538	0,690	0,844	1,000

r: 0, 135, 300, 450, 600, 700, 800, 900, 1000 i: 0, 115, 202, 299, 390, 538, 690, 844, 1000 $L^*_{TUBLOG,U}=[50/\log(5)]\log(Y/Y_U)+50$, $Y_N=4$, $Y_U=20$, $Y_W=100$

Three, 5 and 9 colour steps, produced visual linearization

Magenta M00w − Magenta M16w = White W

s 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
r 0,000	0,600	1,000	0,000	0,300	0,600	0,800	1,000	0,000	0,135	0,300	0,450	0,600	0,700	0,800	0,900	1,000
i 0,000	0,390	1,000	0,000	0,202	0,390	0,690	1,000	0,000	0,115	0,202	0,299	0,390	0,538	0,690	0,844	1,000
f 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
M00w	M08w	M16w	M00w	M04w	M08w	M12w	M16w	M00w	M02w	M04w	M06w	M08w	M10w	M12w	M14w	M16w

hem20-7n, Test samples: 3, 5 and 9 colour steps, greu=0,500, expu=1,000, expa=1,000, expi=1,000