

PostScript-Colour Parameters and 1-Minus-Relation (1MR) of *rgb* and *cmyk*

01 Colour parameters *setgray*, *setrgbcolor*, and *setcmykcolor* in *PostScript*.

02

03 k *setgray* with $0 \leq k \leq 1$ defines colours in the space *DeviceGray*.

04 For $k=0$ the colour is black, for $k=1$ the colour is white.

05 For $0 \leq k \leq 1$ a grey colour is defined between black and white.

06

07 $r\ g\ b$ *setrgbcolor* with $0 \leq r, g, b \leq 1$ defines colors in the space *DeviceRGB*.

08 For $r=g=b=0$ the colour is black, for $r=g=b=1$ the colour is white.

09 For $0 \leq r, g, b \leq 1$ many colours including greys are defined.

10

11 $c\ m\ y\ k$ *setcmykcolor* mit $0 \leq cmyk \leq 1$ defines colours in the space *DeviceCMYK*.

12 If $k=0$ and $c=m=y=1$ the colour is black, for $c=m=y=0$ the colour is white.

13 If $c=m=y=0$ and $k=1$ the colour is black, for $k=0$ the colour is white.

14 For $0 \leq c, m, y \leq 1$ and $k=0$ many colours including greys are defined.

15

16 For $0 \leq c, m, y \leq 1$ and $k=0$ the minimum of $\{c, m, y\}$ can be changed by k .

17 In this case the new parameters of *setcmykcolor* are $\{c-k, m-k, y-k, k\}$.

18 Lines 16 and 17 define the 1-Minus-Relation for the *cmyk* values.

19 The 1-Minus-Relation for values of *rgb* and *cmyk* is $r=1-c$, $g=1-m$, $b=1-y$.

Lines 03 to 14: parameters of *setgray*, *setrgbcolor*, and *setcmykcolor*.

Lines 16 to 19: 1-Minus-Relation between $\{c, m, y, 0\}$, $\{c, m, y, k\}$, and $\{r, g, b\}$.