

Application of colour in daily life or in Colour Information Technology (IT)

Design, architecture, art, industrial products
Measured for CIE standard illuminant D65

colour order system; name and coordinates:

RAL Design System (CIELAB)

$L^*C^*_{ab}h_{ab}$, lightness, chroma, hue angle

Munsell Colour System

VCH, lightness (Value), Chroma, Hue text

Natural Colour System (NCS)

ncu^* : relative blackness, relative chroma

relative elementary hue text

Colour Information Technology
Measured for CIE illuminants D65 and D50

Device system name and coordinates:

Printer system (illuminants D50 or D65):

cmY, content of "cyan", "magenta", "yellow"

Display system (standard illuminant D65):

rgb/sRGB, content of "red", "green", "blue"

No user friendly colour coordinates

Nearly no connection to colour order systems

Aim: define user friendly connection

New: Interpretation of the *rgb* colour data in the range 0 to 1 as elementary colour data rgb^*_3

***Linear* relations between *relative* and *absolute* coordinates $lab^* - LAB^*$**

$rgb^*_3 - L^*a^*b^*C^*_{ab}h_{ab}$ (CIELAB)

$rgb - cmY$, $rgb^*_3 - cmY^*_3$ ("1-minus"-relation)

$rgb^*_3 - nce^*$, $rgb^*_3 - ncu^*$

***relative* coordinates lab^* :** elementary redness r^*_3 , greenness g^*_3 , blueness b^*_3 , blackness n^*
 chroma c^* , elementary hue e^* , elementary hue text u^*