COLOUR PREDICTION MODEL FROM SPECTRAL DATA FOR INKJET PRINTING

Areerat Pathomchaiwal
Department of Printing Engineering
Faculty of Engineering
Siam University
E-mail: areerat.pathom@gmail.com
areerat.pat@siam.edu

ABSTRACT

This research studied color prediction model from spectral data for inkjet printing system based on the estimation of spectral reflectance data. The training set was included of red, green and blue digital color values with ink densities (0 , 0.13, 0.25, 0.38, 0.5, 0.63, 0.75, 0.88 and 1, respectively). Using the Kubelka-munk theory approach, the relationship between the spectral reflectance data and RGB digital color values was established. The relationship between the calculated absorption coefficients (K) and the RGB color by digital values. The accuracy of color prediction model was investigated using a test set. The results showed that the accuracy of spectral data prediction the ΔE^*_{ab} (mean color difference) were 2.44, 2.61.and 2.44, respectively under A, D65 and F11 illumination and no chance of illuminant metamerism.

KEYWORDS: color prediction model, color difference