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APPLICATION OF THE NEURO-FUZZY SYSTEM FOR DATA INTERPOLATION DURING METAMETRIC COLORS REPRODUCTION

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The article deals with improving the corporate colors reproduction accura­cy during printing. The proposed approach is based on the phenomenon of me­tametrism — visual impression of similarity simultaneously with the difference of the colors spectral nature. Images in printing production are subject to transformations using color management system, data for transformations are contained in a special file named the profile of the output device. To reduce the amount of storage memory a color data is generated for a small number of colors, remaining are calculated by interpolation. During color transformations for printing the change in data dimension space occurs and the resulting space is formed by an irregular grid data points. The paper offers to use the neuro-fuzzy system for interpolation calculations in an irregular grid to accurately reproduce colors inside the color gamut. For colors that do not match to the device color gamut a tentative projection onto the gamut near limit plane followed by irregular interpolation is offered.