

A Testing Procedure to Characterize Color and Spatial Quality of Digital Cameras Used to Image Cultural Heritage

Abstract

A testing procedure for characterizing both the color and spatial image quality parameters of trichromatic digital cameras, which are used to photograph paintings in cultural heritage institutions, is described. This testing procedure is target-based, thus providing objective measures of quality. The majority of the testing procedure followed current standards from national and international organizations such as ANSI, ISO, and IEC. The procedure is being tested in an academic research laboratory and representative American museums. The quality parameters tested include system spatial uniformity, tone reproduction, noise, dynamic range, flare, resolution, registration of the color channels, geometric distortion, depth of field, and most importantly, the color reproduction accuracy.

Biography

Erin P. Murphy is a graduate student with the Munsell Color Science Laboratory at the Rochester Institute of Technology and will be graduating with her M. S. degree in Color Science in the summer of 2004. She holds a B.S. in Imaging and Photographic Technology, also from RIT.