

Estimation of Influence of Media's Surface Topology on Image Quality

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Abstract

One of the main goals of high-quality imaging is proper perception and visualization of an image by various devices and on various medias.

Essential to account for structure details to manage colour for most paper or polymeric based materials. This is related to surface topology of the material, its adhesive properties, volumetric, adsorption and diffusion characteristics of the receiving layer.

We have made an attempt to quantitatively account for topological, adhesive, adsorption and diffusion properties of the material and their influence on image photographic parameters.

Image photographic parameters were correlated to surface micro-pattern on the basis of multifractal formalism.

The influence of adhesive and adsorption properties of the material was accounted, as a result of interaction with colored and non-colored ink components.

Cluster analysis of medias of various manufacturers together with the estimated parameters allowed to form, based on them, three large groups, each of which can be characterized by a number of parameters with their own values.

Estimated parameters formed a base for relational database.

Author Biography

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