

The Intensity Dependent Spread Model and Color Constancy

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Odetics is investigating the use of the intensity dependent spread (IDS) model for determining color constancy. Object segmentation is performed effortlessly by the human visual systems, but creating computer vision that takes an image as input and performs object identification on the basis of color has some difficulties. The unknown aspects of the light illuminating a scene in space or anywhere can seriously interfere with the use of color for object identification. The color of an image depends not only on the physical characteristics of the object, but also on the wavelength composition of the incident illumination. IDS processing provides the extraction of edges and of reflectance changes across edges, independent of variations in scene illumination. IDS depends solely on the ratio of the reflectances on the two sides of the edge. We are in the process of using IDS to recover the reflectance image.