Abstract

Illumination conditions confound many computer visions algorithms. In particular, shadows in an image can cause the edge detection algorithm to fail. It also cause the failure of computer visions algorithms such as segmentation, tracking, or recognition algorithms.

One possible sollution to the confouding problems of shadow are to derive mage which are shadow free. One of the way to remove the shadow is using the intrinsic of an image, reflectance and Shading which are adobted primate visual system L, M, S (Long-wavelenght sensitivity, Medium-wavelenght sensitivity, Short-wavelenght sensitivity) cone space. The first step in Soft shading removal is corverting the RGB image into LMS image which are every single pixel on its image contains relative capture ratios of the three human cone types. The LMS will then transformed into chromatic and luminance image which are will be use to identify the reflectance of an image.

The final result is a reflectance image with the small contour had already eliminated and it means that there are no soft shading and shadowless image. From this process will be figured out the influence of RGB to LMS convertion mechanism in deriving the final result. Based on the test result, this process successfully reduce the self-shadow, but not robust enough to handle cast shadow.

Keywords: *reflectance, shading, shadow, LMS cone space*