Abstract

Color is a powerful descriptor that often simplifies object identification and extraction from a scene. General technique for “colorizing” grayscale images is by transferring color to grayscale images. Color can be added to grayscale images such as old black and white photos, classic movies or scientific illustrations. Even for some cases, it is useful for colorizing grayscale images of luggage acquaired by X-ray equipment at an airport, scanning electron microscopy (SEM) and other imaging modalities in which color information does not exist.

This final task is about implementing technique for colorizing grayscale images with global image matching method. The application itself will be transfer color between color image as a source and grayscale image as a destination, which are both of that two images act as an input and the output will be the color image where the original image is a grayscale but already has color in it.

Transferring color from color image as a source to grayscale image as a destination is done by matching the luminance information within the two images. The end of the process, the chromatic channel will be transferred from a color image and keep the luminance value of a grayscale image.

Keywords: **colorizing, grayscale, luminance, global image matching**