Motivation
Several surgical disciplines have relied solely on visible spectrum imaging for years. Many exciting developments are emerging in the field of hyperspectral fluorescent dyes that can be designed to help locate critical anatomy and pathology or visualize blood flow. Often the quality of the fluorescence images is substandard compared to visible light images and could use improvement.

Related Work

Experimental Results

Fluorescence Improvement Algorithm

- Find circular boundary of image for masking
- Split fluorescence from grayscale
- De-noise grayscale image
- De-emphasize fluorescence non-uniformity
- Correct fluorescence non-uniformity
- Locate grayscale reflections
- Map grayscale illumination non-uniformity
- De-emphasize ambient fluorescence levels
- Recombine grayscale and fluorescence images