SFM FOR RGBD CAMERA

by

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ABSTRACT

AKASH CHANDRA SHEKAR. SFM for RGBD Camera. (Under the direction of
DR. ANDREW WILLIS)

The consumer RGBD cameras are very affordable and have numerous applications in
various domains like robotics, surveillance, and perception. Significant work has been
carried out in this field with triumphant results. However, the RGBD cameras use
structured light in infrared spectrum which is sensitive to the sun light, they do not
work well outdoors. In this paper, we propose a novel method to incorporate SFM
which uses visual features to approximate the depths. By doing so, we can develop
a hybrid system which helps in switcing between RGBD depth sensor and SFM for
suitable scenarios. We show that the main advantage of such hybrid system is that
we can easily apply all the RGBD algorithms at our disposal for outdoor problems
which was not possible earlier.