

High Dynamic Range Imaging (HDRI) for Preservation of Historical Documents

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Abstract

There has been great effort of digitally archiving historical documents for distribution and preservation. There are different ways to accomplish this and one of the most affordable and available way is by using digital cameras. Although regular digital cameras can produce images similar to the original documents, there are still technical barriers that digital photography stumbles with regard to producing an exact image of the original document (i.e. dimensions, resolution, color range, etc).

In this paper we attempt to alleviate the impediment of color range in traditional photography by applying High Dynamic Range Imaging (HDRI) techniques to traditional digital photography and making historical documents resemble better the original documents. HDRI is an image processing technique that is used to increase the range of luminosity in regular cameras to model that of the real world. This technique has become more popular in recent years. However, little has been done to apply this technique in the realm of preservation of historical documents. In this paper, we show the great potential of this technique to improve digital preservation of historical documents and compare our results to traditional techniques.