

Creating of High Dynamic Range Panorama for e-Museum Applications

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Normal Digital Image



High Dynamic Range Image

High Dynamic Range Imaging (HDRI) is a set of techniques that attempts to overcome the limitation in dynamic range of digital photography. It is used for creating images which contains a more detail in the aspects of highlight and shadow or contains a very large degree of exposure or brightness values than normal digital images. The most common method for producing HDR images is to capture a single scene in multiple differently range of exposure levels and then mathematically combine these images into a single High Dynamic Range image.

In e-museum applications, the combination of creating High Dynamic Range images and creating spherical panorama is a very useful technique to create a 3D virtual system from 2D digital photographs. With this combination, we can preserve and visualize the real scene in 360° x 180° panorama with a very highly detail than normal digital images. This presentation will describe all workflow using to create a high dynamic range spherical panorama for e-museum applications. That will cover digital photographing techniques including a camera and related equipments preparation, camera's setup and photographing method. The post production of HDR images and development of spherical panorama and the difficulties of creating HDR in e-museum will be discussed definitely.