

Fusion Tone Mapping for HDR images

Areerat Pathomchaiwal

Department of Printing Engineering, Faculty of Engineering, Siam University

38 Petchkasem Road, Phasi Chareon District, Bangkok 10160, Thailand

E-mail: areerat.pathom@gmail.com

Abstract

In this study, we propose tone mapping (TM) method for compressing high dynamic range (HDR) images to low dynamic range (LDR) displays by fusion tone mapping (FTM) method. Firstly, HDR images was produced from multiple LDR images of the same scene with different exposures, through an image alignment method. Next, the HDR images converged LDR images are rendered with a FTM method and displayed on LDR display device. Our approach is subsequently combined with luminance map and bilateral filter, adjust the color saturation and brightness of an image. Finally, the experiment results showed that FTM outperforms and comparison that than other TM methods in the subjective psychophysical evaluation.

Key words: high dynamic range, low dynamic range, tone mapping.