Zhuoying Zeng, J Inform Tech Soft Engg 2015, 5:2
http://dx.doi.org/10.4172/2165-7866.S1.003

OMICS International
conferenceseries.com

Global Summit and Expo on
Multimedia & Applications

August 10-11, 2015 Birmingham, UK

A fast encoder of frame-compatible format based on content similarity for 3D distribution

Zhuoying Zeng
China Acadamy of Electronics and Information Technology, China

Frame compatible format (FCF) which multiplexes the left and right eye views in to one frame spatially has been considered as one of the most promising solutions for 3D video broadcasting. In this paper, a fast algorithm exploiting the content similarity is proposed to reduce the computational complexity for coding FCF. A low complexity average shift estimation method is proposed to find the matching blocks in the two inter leaved views based on which mode candidate sets are designed for accelerating intra and interceding of the second inter leaved view (the inter leaved view at the bottom/right in FCF) by exploiting inter-view correlations. The proposed algorithm achieves an average of 72.45% reduction in Intra coding complexity and an average of 81.08% reduction in Inter coding complexity for the second inter leaved view respectively with negligible loss in compression efficiency. By combining with conventional fast algorithms that is applying an conventional fast algorithm to code the view on the top/left and the proposed one to code the view on the bottom/right, the whole encoder provides up to 5.44 times higher encoding speed relative to applying the conventional algorithm solely to the whole frame with negligible performance degradation.

Biography

Zhuoying Zeng has received her BS degree in Electrical Engineering from Shanghai Jiao Tong University, China in 2009 and the MS degree in System LSI from Graduate School of Information, Production and System, Waseda University, Japan and Shanghai Jiao Tong University at 2011 and 2013 respectively. She is currently an Engineer in China Academy of Electronics and Information Technology.

staceyzeng@163.com

Notes: