
Dan Miao

Contact Information

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Education

- B.S.E. Degree, Department of Electrical Engineer and Information System, University of Science and Technology of China, July 2009.
- Ph.D. Student, Department of Electrical Engineer and Information System, University of Science and Technology of China. Sept 2009 – Present, (Advisor: Prof. Chang Wen Chen)

Research interests

- Image/Video compression, transmission
- Depth data compression
- 3D video compression, transmission, rendering, representation

Publications

- **Dan Miao**, Jingjing Fu, Yan Lu, Shipeng Li, Chang Wen Chen, “Layered screen video coding leveraging hardware video codec,” accepted by ICME 2013.
- **Dan Miao**, Jingjing Fu, Yan Lu, Shipeng Li, Chang Wen Chen, “Texture-assisted Kinect depth inpainting,” ISCAS 2012, 604-607.
- **Dan Miao**, Jingjing Fu, Yan Lu, Shipeng Li, Chang Wen Chen, “Layered compression for high dynamic range depth,” VCIP 2012, accepted.
- **Dan Miao**, Wenwu zhu, Chong Luo, Chang Wen Chen, “Resource allocation for cloud-based free viewpoint video rendering for mobile phones,” ACM Multimedia 2011, 1237-1240.
- Jingjing Fu, **Dan Miao**, Weiren Yu, Shiqi Wang, Yan Lu, Shipeng Li, “Kinect-like depth compression with 2D+T prediction,” ICME Workshops 2012, 599-604.
- Jingjing Fu, **Dan Miao**, Weiren Yu, Shiqi Wang, Yan Lu, Shipeng Li, “Kinect-like depth data compression,” IEEE Trans. on Multimedia, accepted, to appear.
- Wenwu Zhu, **Dan Miao**, Hongzhi Li, “Real-time 3D application on handheld devices: challenges and trend,” IEEE COMSOC MMTC E-Letter, vol. 6, No. 6, June 2011.

Work Experiences

2013.3-present Visiting Student, University at Buffalo

2011.8-2013.3 Research intern, Microsoft Research Asia

- Research area: Screen video compression
- Design a layered screen video compression scheme based on conventional video codec with high compatibility for the implementation.

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- Research area: Depth data processing and compression
 - Design a layered depth compression scheme for high dynamic range depth captured from sensors. The conventional video codec can be employed directly.
 - Proposed a depth inpainting algorithm using the texture information for Kinect depth data.
 - Designed a Kinect-like depth data compression scheme based on the 2D+T prediction algorithm, considering the physical information of depth data.

2010.9-2011.7 Research intern, Microsoft Research Asia

- Research area: 3D video compression, transmission, rendering
- Designed a cloud-based FVV rendering framework for mobile devices over cellular networks. The resource allocation which jointly considers rendering allocation and rate allocation is proposed to achieve maximum QoE.

2009.10-2010.2 Information Processing Lab, University of Science and Technology of China

- Research area: SVC transmission in cellular-cum-mesh wireless networks
- Designed a scheduling scheme for SVC transmission in cellular-cum-mesh wireless networks to improve the best possible end-to-end video quality for the users.