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Title [MPEG-I Visual] Estimated depth maps for ClassroomVideo sequence
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Abstract

This document describes proposed depth maps estimated by Immersive Video Depth Estimation for ClassroomVideo sequence. The results of coding the anchor using TMIV when proposed depth maps are used are also included.

1 Introduction

One of the subjects considered in the current MPEG-I activities in the context of prospective 6DoF/3DoF+ is estimation of depth maps using the omnidirectional views. This contribution includes depth maps estimated for ClassroomVideo sequence [1] using the IVDE software [2].

2 Estimated depth maps

Depth maps were estimated using denoised input views of ClassroomVideo sequence. The estimation was performed for 150 000 superpixels per each view. 16-bit depth maps in cf 420 are available on the MPEG content server (<http://mpegfs.int-evry.fr/mpegcontent/ws-mpegcontent/MPEG-I/Poznan/m53567>).

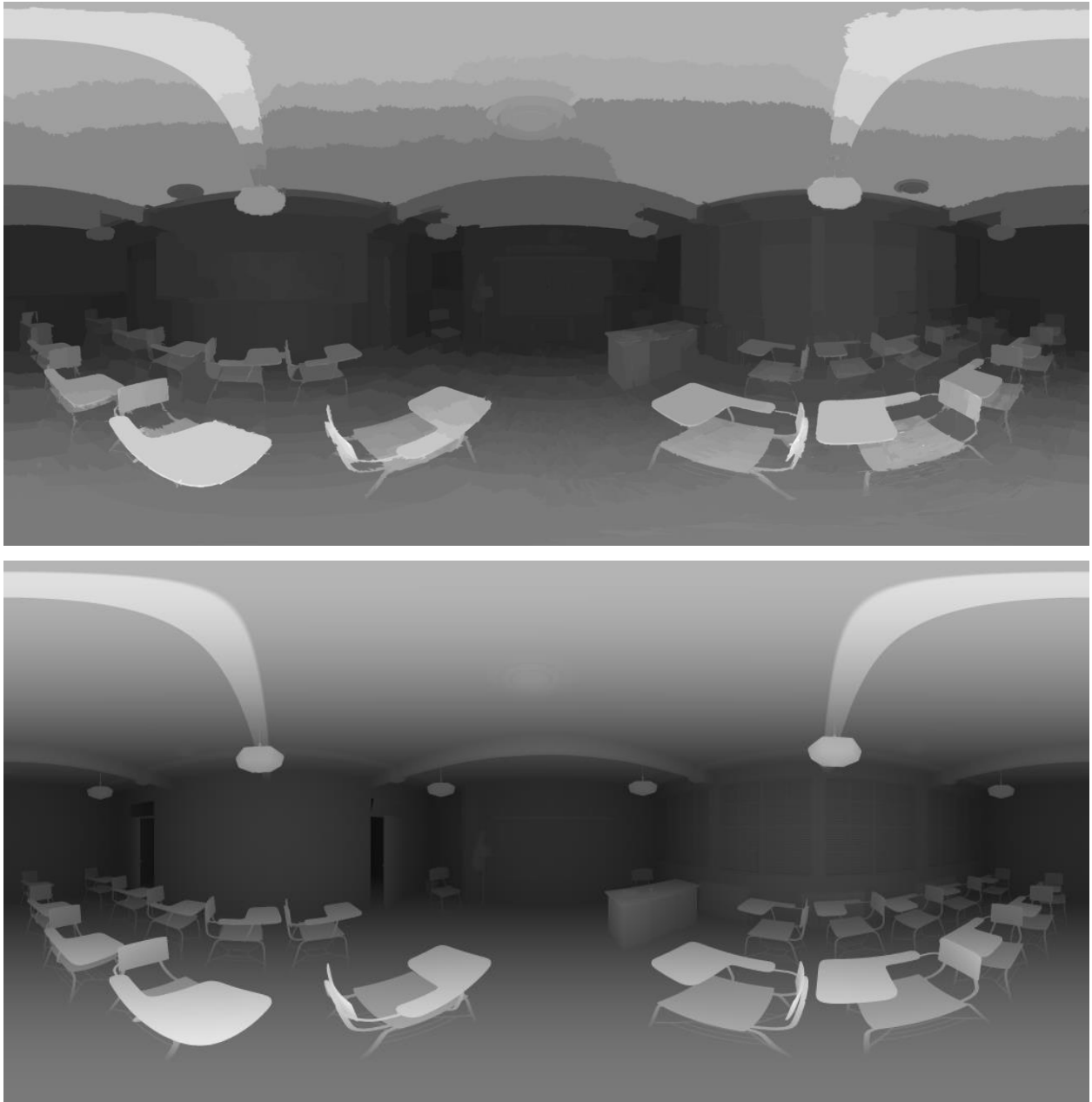


Fig. 1. Comparison of estimated depth map for view 5 with the ground-truth [3].

3 Experimental results

To be included.

4 Recommendations

More activities on omnidirectional depth estimation should be further encouraged.

Acknowledgement

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References

- [1] Bart Kroon, “3DoF+ test sequence ClassroomVideo”, ISO/IEC JTC1/SC29/WG11 MPEG2018/M42415, April 2018, San Diego, CA, US
- [2] Dawid Mieloch, Adrian Dziembowski, Jakub Stankowski, Olgierd Stankiewicz, Marek Domański, Gwangsoon Lee, Junyoung Yun, “[MPEG-I Visual] Immersive video depth estimation”, ISO/IEC SC29/WG11 MPEG2020/M53407, Online, April 2020.
- [3] Bart Kroon, “Full depth maps for ClassroomVideo”, ISO/IEC JTC1/SC29/WG11 MPEG2018/M42944, July 2018, Ljubljana, Slovenia