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Title: [MIV] Crosscheck of m62701
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Abstract

This document is a cross-check report on KETI's proposal m62701, adaptive patch-wise depth range linear scaling. It was verified that the crosscheck results completely match those reports in m62701.

1 Introduction

KETI's contribution, m62701[1], suggests a patch-wise depth range linear scaling and syntax elements for min-max depth values for each patches, which reported 8.2% of Y-PSNR BD-rate. The proposal addresses that depth information loss may occur because of downscaling and lossy coding. Therefore, the proposal presented a patch-wise min-max depth linear scaling for more accurate representation of depth value for each patch. The proposal showed significant improvement of BD-rate on CG sequences by extending the depth dynamic range. For NC sequences, the proposed algorithm was not used because there were negligible increases of rendered views compared to increased bitrates.

2 Experimental Results

The implementation of the proposal was based on TMIV v15.0[2]. The crosscheck experiments were conducted under the common test conditions (CTC) of the MIV[3], for CG sequences on 65 frames: Chess, Guitarist, Cadillac, Fan, and Group. Experimental results of KETI and SKKU were exactly same, as shown in the attached excel template.

3 Conclusion

It was verified that the results matched exactly those reported by the proponent and the description in the proposed method in m62701 matches the implementation in the software.

4 References

- [1] "Adaptive Patch-wise Depth Range Linear Scaling", S. -G. Lim, H. -H. Kim, Y. -H. Kim, ISO/IEC JTC1/SC29/WG4 input document m62701, April 2023, Antalya.
- [2] "Test Model 15 for MPEG Immersive Video", A. Dziembowski, B. Salahieh, ISO/IEC JTC1/SC29/WG4 output document n00271, October 2022, Mainz.
- [3] "Common Test Conditions for MPEG Immersive Video", A. Dziembowski, B. Kroon, J. Jung, ISO/IEC JTC1/SC29/WG4 output document n00203, January 2023, online meeting.