

**INTERNATIONAL ORGANISATION FOR STANDARDISATION
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ISO/IEC JTC1/SC29/WG11
CODING OF MOVING PICTURES AND AUDIO**

**ISO/IEC JTC1/SC29/WG11 MPEG2019/M53941
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Source Poznań University of Technology (PUT), Poznań, Poland
Status Input
Title Comments on EE 6DoF
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1 Introduction

This document contains comments and suggestions for EE 6DoF [N18998].

2 Test material

- 1) MIV CTC should be followed:
 - a) division of content on CG/NC categories,
 - b) more omnidirectional sequences should be added,
 - c) sequence naming should be aligned,
- 2) .json file with camera parameters for all sequences should be attached to EE 6DoF document:
 - a) request proponents of new sequences to provide such .json,
 - b) existing .json files have to be checked (e.g. “fps” value is often set to 1),
- 3) Remove redundant information from EE 6DoF document:
 - a) tables with camera extrinsics,
 - b) zNear and zFar values,
- 4) Redundant information which should stay in the document:
 - a) resolution,
 - b) frame rate,
 - c) bps and chroma format,
- 5) content updates should be signaled in the EE 6DoF document,
- 6) view naming should be unified,
- 7) all frames (for each view) should be available in one YUV file,
- 8) example:
- 9)

2.8. IntelFrog

Sequence characteristics:

Input contribution	m43748, m44914
Length	300 frames
Frame rate	30 fps
Number of source views	15
Camera arrangement	15 x 1
Source view resolution	1920 x 1080

Updates	
Texture	MPEG126 (m36000)
Depth maps	MPEG129 (m48500)
Camera parameters	MPEG128 (m51200)
Download	
http://mpegfs.int-evry.fr/mpegcontent/ws-mpegcontent/MPEG-I/Intel/IntelFrog Texture: TextureContent/vAll_1920_1080_8bYUV420.tar.gz TextureContent/vAll_1920_1080_10bYUV420.tar.gz Depth maps: DERS7_DepthMaps/vAll_1920_1080_0_3_1_62d_10bYUV420.tar.gz DERS7_DepthMaps/vAll_1920_1080_0_3_1_62d_16bYUV400.tar.gz	

Camera arrangement:

v0	v1	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11	v12	v13	v14
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2.9. PoznanFencing

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3 EE_Depth

- 1) Alignment with MIV CTC to be considered:
 - a. change number of frames: 8 => 17,
 - b. change start frame according to MIV CTC,
 - c. add more objective quality metrics (VMAF, IVPSNR),
 - d. add metrics of computational complexity (time of estimation, memory requirements),
 - e. add MIV-like side-by-side comparison of the current reference vs the proposals:
 - i. on a subset of synthesized input views in 1st phase,
 - ii. on posetraces in 2nd phase,
 - f. add computation of A17 anchor using estimated depth maps to provide the possibility of testing other aspects than the quality of synthesized view,
- 2) Views synthesized using depth maps obtained using the current version of depth estimation reference software should be available at MPEG Content server in order to facilitate subjective quality assessment for new proposed tools,
- 3) More challenging sequences should be used for new tools evaluation (could be the optional content from MIV CTC, e.g. PoznanHall),
- 4) Test conditions for evaluation of omnidirectional depth estimation should be defined:
 - a. sequences: SA, SB, SC (17 frames), ClassroomImage (1 frame, maybe to be removed),
 - b. additional omnidirectional content should be considered (e.g. static content from m44461),
- 5) Reporting template should be modified accordingly.

4 Acknowledgement

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5 References

- [N18998] Exploration Experiments for MPEG-I: 6DoF
ISO/IEC JTC1/SC29/WG11 MPEG/N18998, January 2020, Brussels, Belgium