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**INTERNATIONAL ORGANIZATION FOR STANDARDIZATION**

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**ISO/IEC JTC 1/SC 29/WG 7 MPEG 3D Graphics Coding**

**ISO/IEC JTC 1/SC 29/WG 7 N** **0098**

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| **Title** | **CE4FE 0.2 on Content** |
| **Source** | **WG 7, MPEG 3D Graphics Coding** |
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# Abstract

This document describes Core Experiment 0.2 on the PCC content.

# Introduction

The goals of CE0.2 are to:

1. Investigate the new MPEG PCC content. Decide what (if anything) needs to be modified in the content so that it is in a state where the V-PCC and G-PCC Test Models (PCC TMs) can be run on it, and so that it fits within the requirements outlined in the CTC document.
2. Prepare the content according to the decisions made in step 1.
3. Run the PCC TMs on the new content, for the category for which the content was intended by the contributors, under the corresponding CTC conditions, to make sure that the PCC TMs and the metric software work as expected, and to produce anchor results for the new datasets.
4. To maintain the CTC sequences on the MPEG content server.

The experimental results of this CE will be evaluated by the 3DG/PCC AhGs. The desired end goal is that the new content will then be recommended for inclusion in the PCC CTC, for the category/ies for which the content was intended by the contributors.

# Mandates

The mandates for CE0.2 are as follows:

1. Investigate the new MPEG PCC content and decide what (if anything) needs to be modified in the content so that it is in a state where the appropriate TMs and the metric can be run on it, and so that it fits within the requirements outlined in the CTC document. Prepare the content according to the decisions made in step 1.
2. Run the TMs on the new content, for the category for which the content was intended by the contributors, under the corresponding CTC conditions, and to produce anchor results for the new datasets.
3. Provided that the content is deemed usable by the PCC group according to the results of the investigation and experiments described above, recommend the content for inclusion in the PCC CTC, for the category/ies for which the content was intended by the contributors.
4. To maintain the CTC content on the content server.

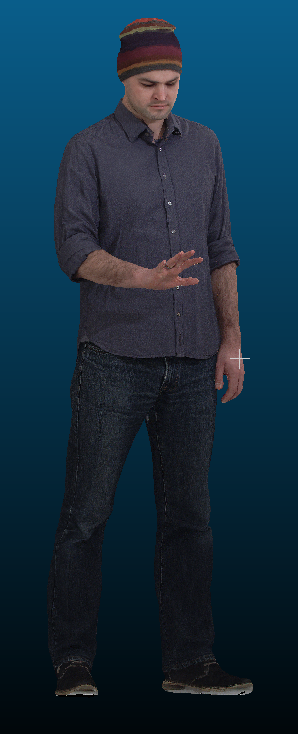
# CE activity

## **New sequence evaluation**

### **Volucap content (m56018 [3], m56192[4])**

* Volucap\_T003\_ThomasScenic-03 (748 frames @ 25fps)
* Volucap\_T097\_Mitch2.1-05 (475 frames @ 25 fps)

Both datasets can be downloaded from the MPEG content repository <https://mpegfs.int-evry.fr/mpegcontent> and then going to the directory ./Explorations/3DG/Volucap.

Left: Volucap\_T003\_ThomasScenic-03 (frame: 00170)

Right: Volucap\_T097\_Mitch2.1-05 (frame: 00001)

The XD Productions (www.xdprod.com) content is proposed by m56192 [4].

### **xdprod football (m56018[3], m56192 [4])**

The dataset can be downloaded from the MPEG content repository <https://mpegfs.int-evry.fr/mpegcontent> and then going to the directory ./Explorations/3DG/XdProd/xdprod\_football



xdprod\_football\_11bits (frame:1365600)

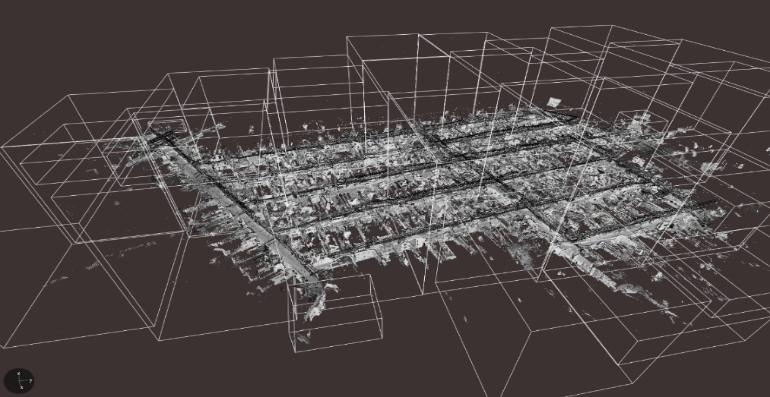
Please note the included Licence Agreement that is linked with each of the content items.

These contents will be evaluated with the latest Test Models.

### **dense and large-scale point cloud data (m56870[5])**

A dense and large-scale point cloud data is proposed in m56870.

When the content is available, the characteristic should be evaluated with the latest G-PCC Test Models.



Overview of the proposed sequence in m56870

## **CTC sequences maintenance**

The use of the following folder structure is suggested.

* + /ctc\_test\_sequences:
    - zip individual sequences (ply, copyright，any processing documents such as readme, md5 for ply)
    - cat2/3: each sequence includes multiple ply files;
    - one MD5 with one entry per line
    - Generate MD5 using binary option (md5sum in linux)
  + /candidate\_test\_sequences:
    - store those sequences which may become test sequences in the future
  + /archived\_test\_sequences
    - store old versions of test sequences, clearly named such as \*\_float.zip, or different versions of ctc\_test\_sequences for archival purposes

# Participants

|  |  |  |  |  |
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| NTT | Shiori Sugimoto | shiori.sugimoto.st@hco.ntt.co.jp | dense and large-scale point cloud | P |
| KDDI | Kyohei Unno | [ky-unno@kddi-research.jp](mailto:ky-unno@kddi-research.jp) | CTC content maintenance | C |

(P = proponent, C = cross checker)

# Document and Software References

1. Thomas Ebner, Ingo Feldmann, Oliver Schreer, Peter Kauff, and Tanja v. Unger, “HHI Point cloud dataset of a boxing trainer,” ISO/IEC JTC1/SC29 WG11 (MPEG) input document m42921, Ljubljana, July 2018
2. Abhishek Nagar, Jace Miller, Narasimhan Venkataramana, and Andrew J. Dickerson, “Samsung Stereo-reconstructed Point-cloud Video Dataset,” ISO/IEC JTC1/SC29 WG11 (MPEG) input document m42748, San Diego, April 2018
3. m56018 "[V-PCC][EE0.2-related] Point cloud and mesh content supply", ISO/IEC JTC1/SC29 WG7 (MPEG), Jan. 2021
4. m56192 "Volucap and XD Productions Datasets", ISO/IEC JTC1/SC29 WG7 (MPEG), Jan. 2021
5. m56870 " New dataset for granularity slicing experiments", ISO/IEC JTC1/SC29 WG7 (MPEG), Apr. 2021