

# <m55363> Update of requirements for V-PCC v2

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## <Abstract>

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- In this contribution, we list new use-cases that should be considered by the group for targeting mesh compression.
- The goal is to include in the requirements data types that are believed to be of interest from the industry and academia.
- The purpose of this contribution is to present new cases and start a discussion on either extending the current PCC project, or creation of a new part, based on the V3C specification.
- Additionally, we hope that this contribution act as a catalyst for technical contributions on mesh compression.

# <MESH CONTENT>

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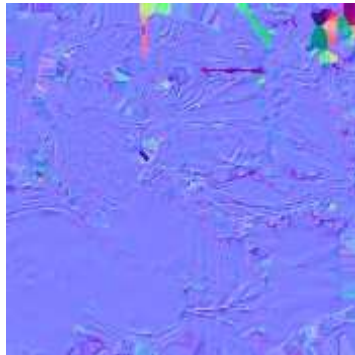
- We propose to include in the requirements for mesh compression the following new use-cases:
  - Floating-point and Voxelized mesh content
  - Registered and Non-registered mesh content
  - Rigged mesh content
  - Mixed content
    - Tracked and untracked mesh content
      - (clean content)
    - Tracked/untracked mesh and point cloud content
      - (clean and noisy content)

# Examples of floating-point mesh data



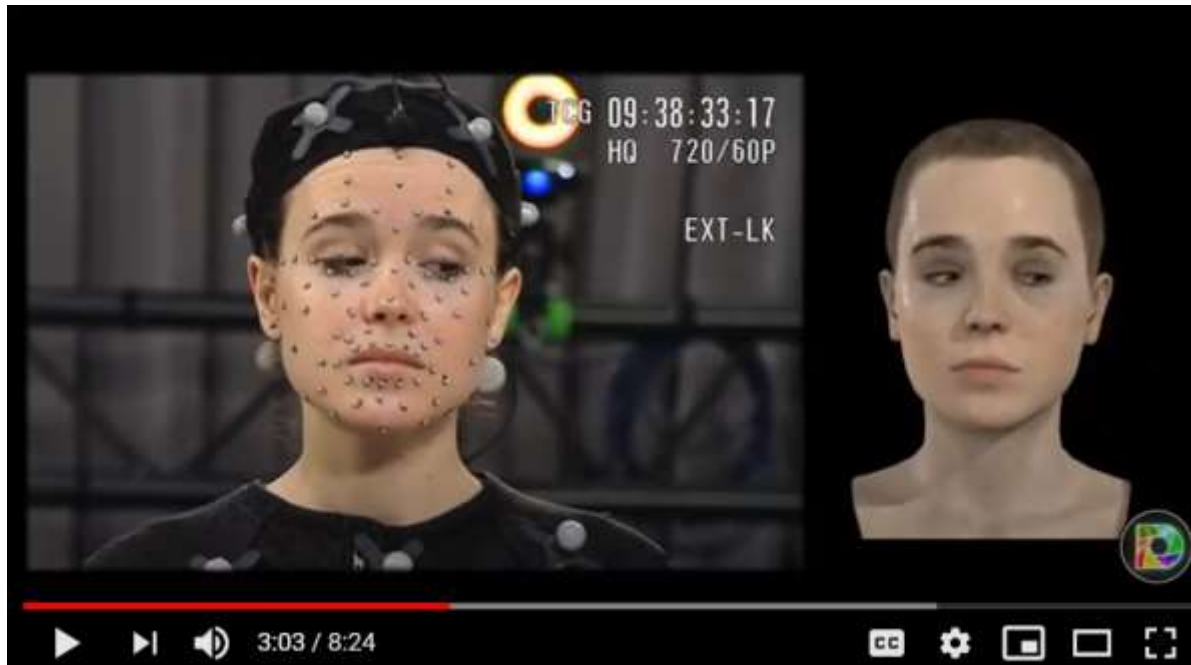
```
# 3ds Max Wavefront OBJ Exporter v0.97b - (c)2007 guruware
# File Created: 06.12.2018 16:03:17

#
# object Jess_Casual_Walking_001_Vray
#
mtllib Jess_Casual_Walking_001.mtl
v -44.4140 -107.0191 33.3839
v 39.3553 -319.0138 19.4809
v 76.1228 220.1020 113.6189
v 71.5332 143.1668 223.8207
v 20.6617 -191.5423 96.4831
v 49.3052 200.5206 282.1293
v -58.2500 -108.6439 1363.9957
```

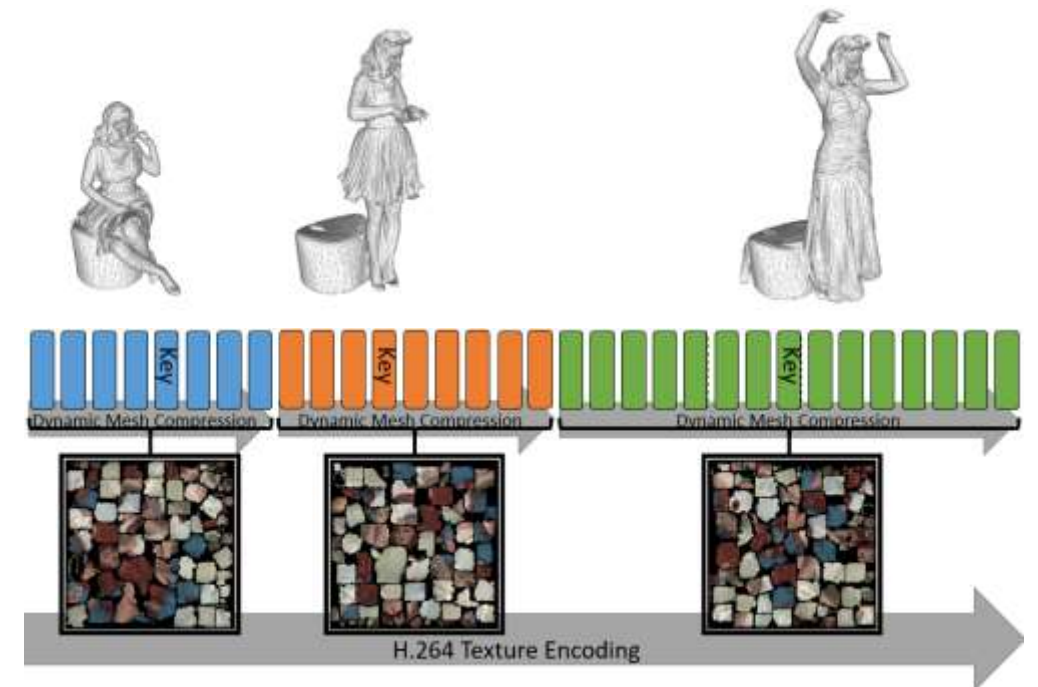


# Examples of tracked data

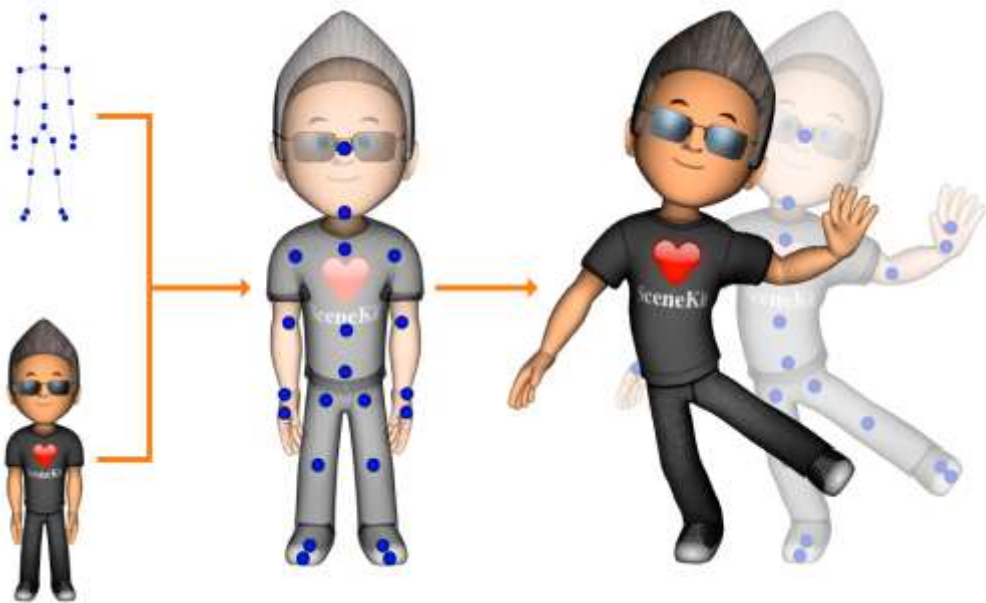
- Tracked data generated from motion capture models
- Mesh tracking techniques using machine learning



<https://www.youtube.com/watch?v=bzTWXTib1gU>



# Examples of rigged data



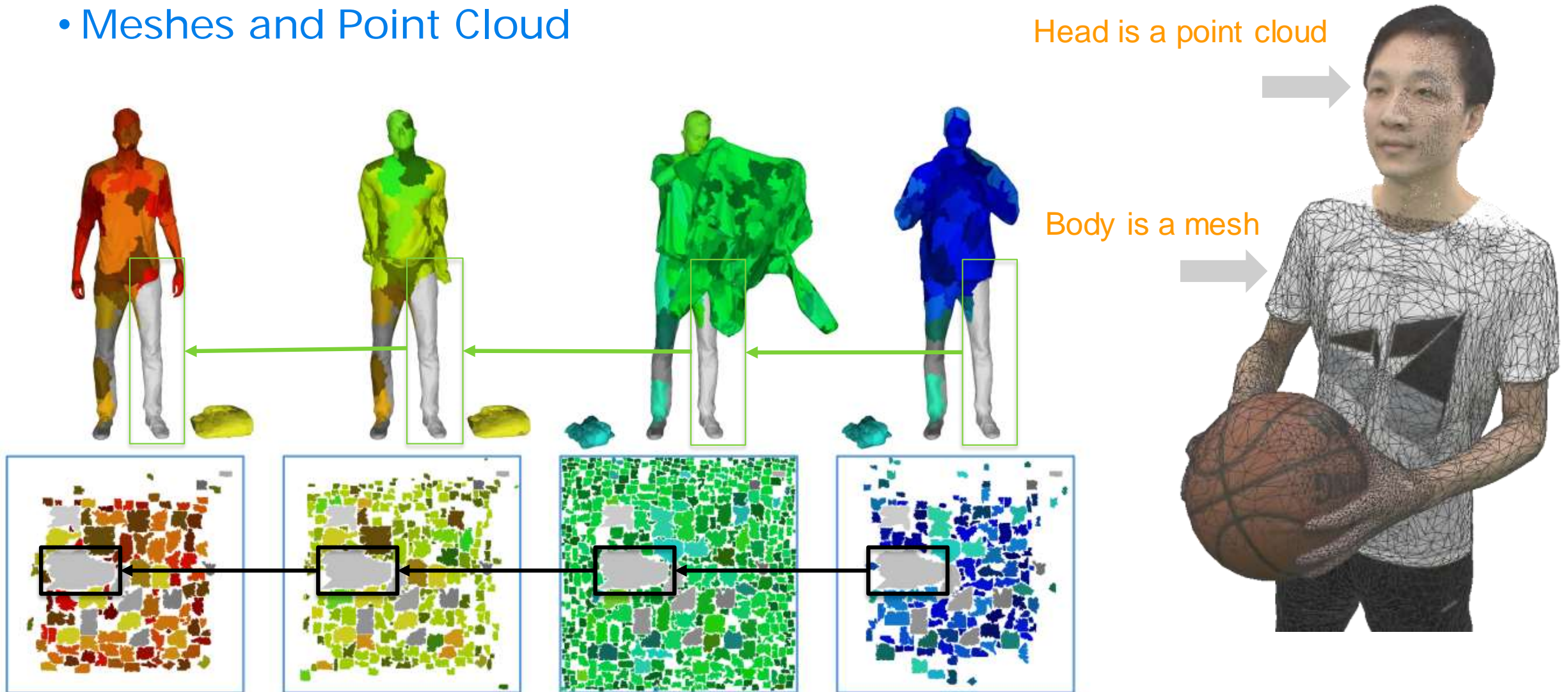
<https://renderpeople.com/>





# Examples of mixed content

- Tracked and untracked content
- Meshes and Point Cloud



## <Conclusion>

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- We reported in this contribution several different mesh characteristics, (e.g. voxel/float geometry, registered/non-registered, noisy/clean) that we believe the group should consider moving forward with mesh compression standardization.
- We suggest the group to discuss the use-cases and the proposal of inclusion of different meshes in the requirements for mesh compression.