

# Dynamic fusion

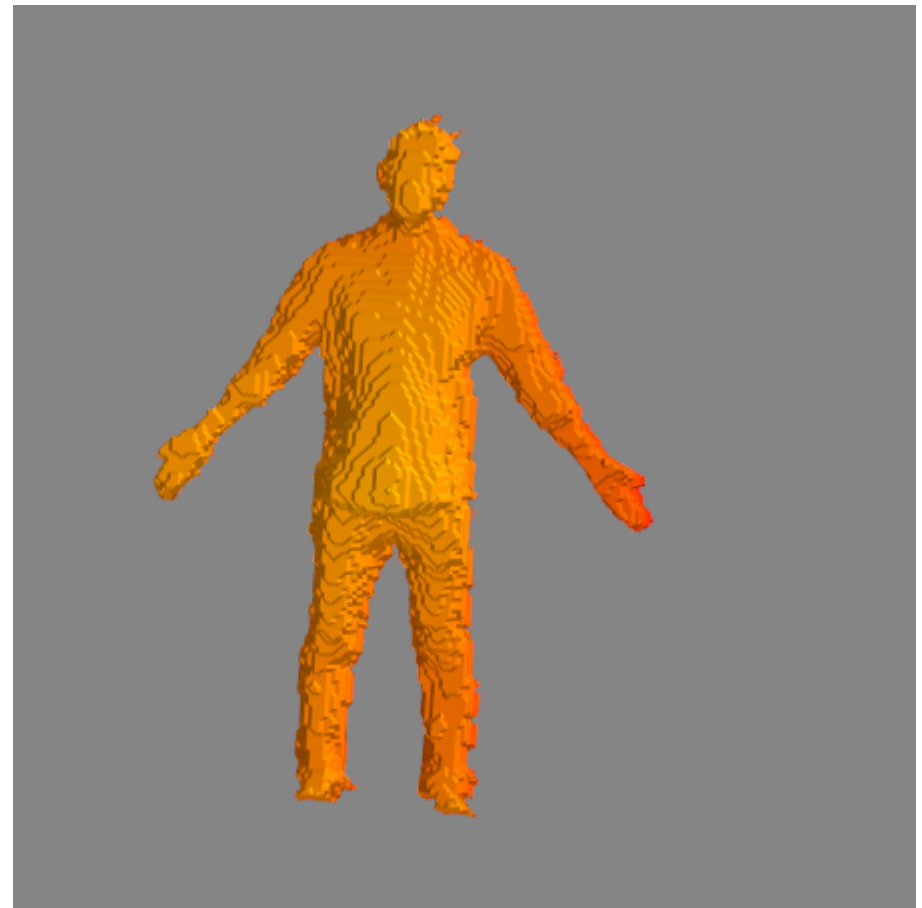
Internship Week 10  
Fusion : Marching cubes  
27 April 2017

# Last meeting

- Previously
  - Bounding Boxes done
  - OpenCL installed
  - Fusion :
    - marching cube wrong input
    - residuals
- Plan for the week:
  - Marching Cubes
  - Generate depth image from marching Cubes

# Progress

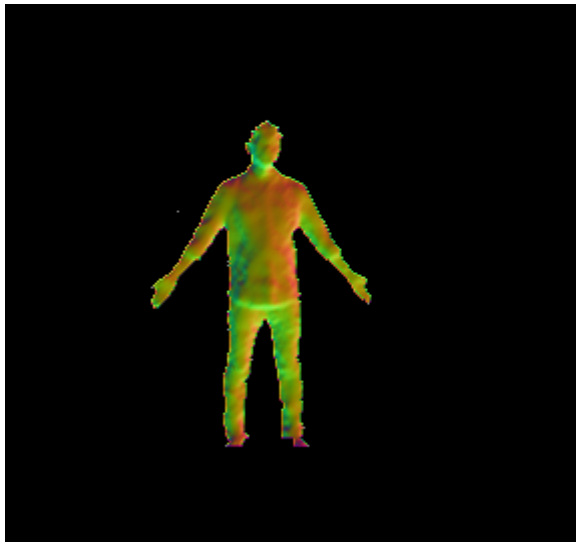
- Marching Cubes
  - Using lib skimage, measure
    - => no save
    - but can use outputs
  - TSDF ?



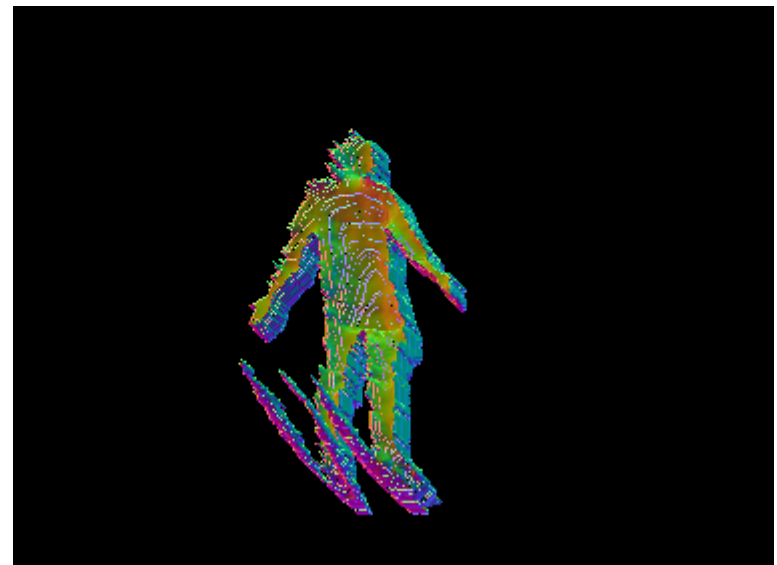
# Results

- Generating depth image from Marching Cubes

Using draw\_optimize :  
Recompute depth image,  
Vertexes, normals

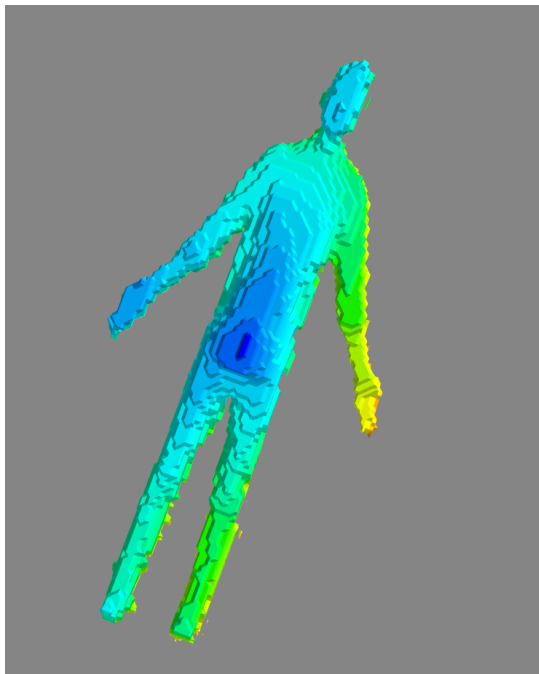


Using vertexes and normals from the  
output of marching cubes

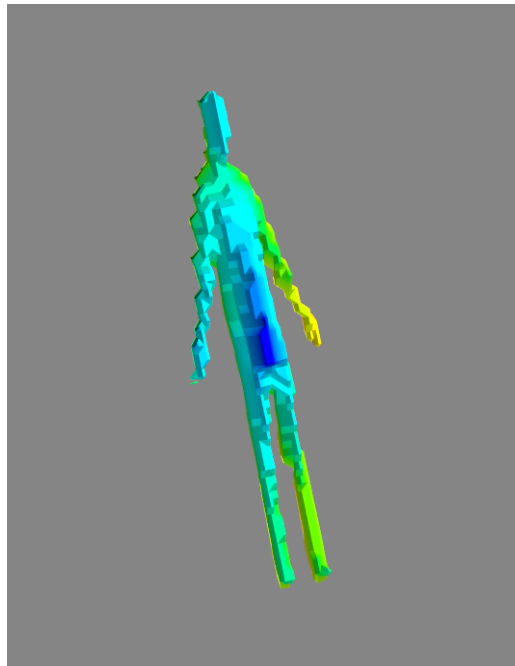
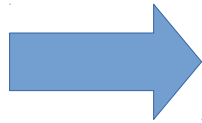


# Result

- Non segmented Fusion
  - Disappearing



Fusion for 1 image

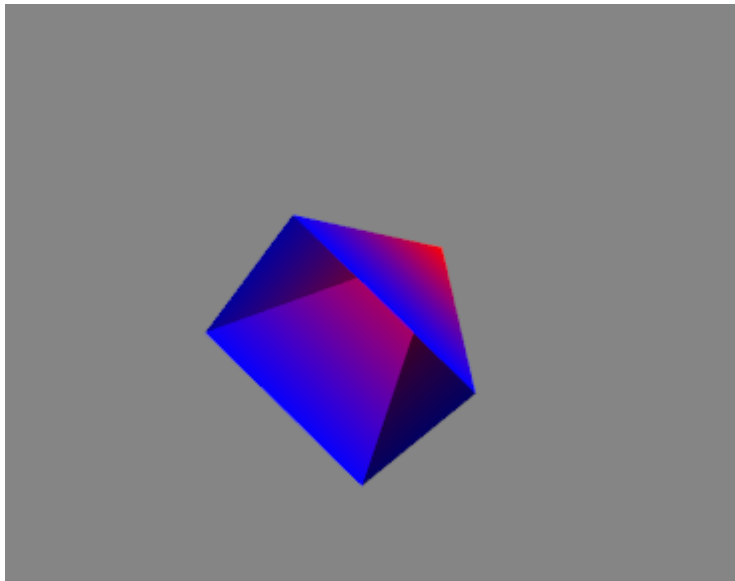


Fusing 10 images

- Adding test in TSDF
- Comparing normals :  
Points are  
corresponding only if  
points going outside the  
depthmap frame are  
considered

# Result

- TSDF for segmented part
  - Wrong TSDF values (e.g:  $0.13 \rightarrow 2$ ) => cannot choose 0.0 as iso-surfaces



Result for an iso-surface at 0.2

# Action plan

- Recreate depth map properly
- Global Fusion
- Segmented Fusion (Kinect or Dynamic)

# Q&A

- Depth image and dynamic Fusion