Dynamic fusion

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Internship Week 9
Bounding Boxes & Fusion
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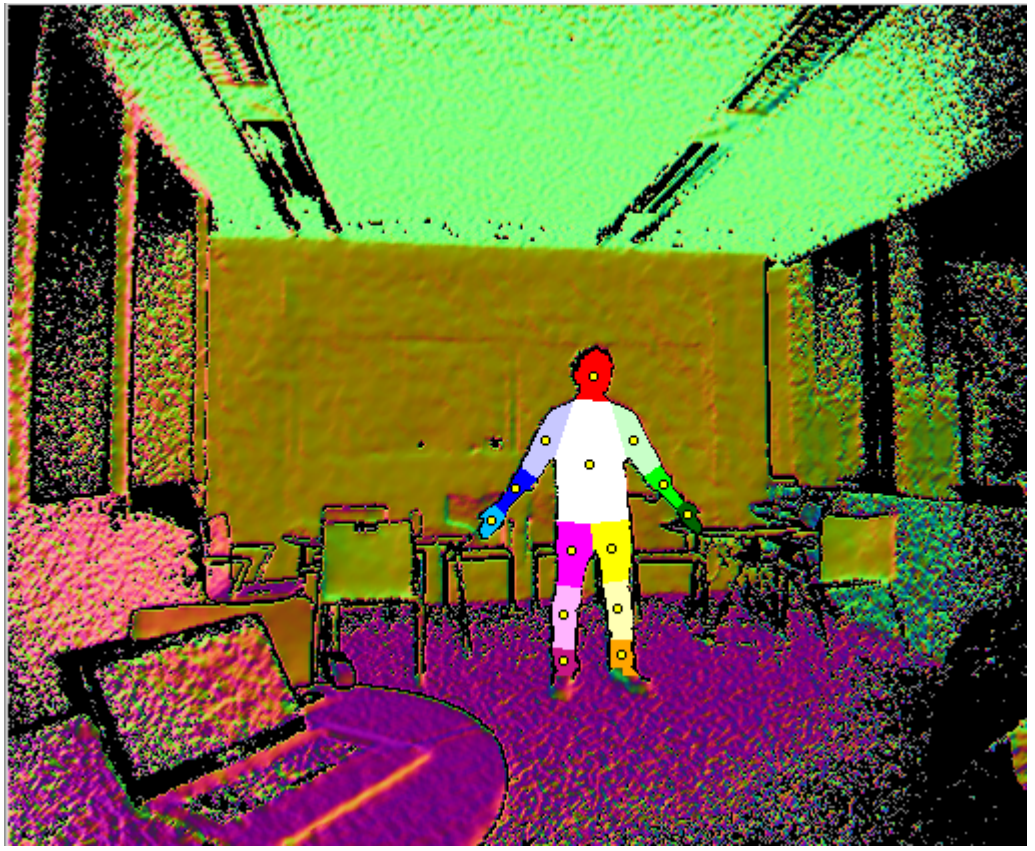
Last meeting

- Previously
  - Bounding Boxes :
    - Center was median (!=not mean)
    - Coordinates systems OK
  - Windows installed but still missed OpenCL
- Plan for the week:
  - OpenCL on Windows
  - Finish Bounding Boxes
  - Start fusing data for segmented body

Progress

- Bounding Boxes

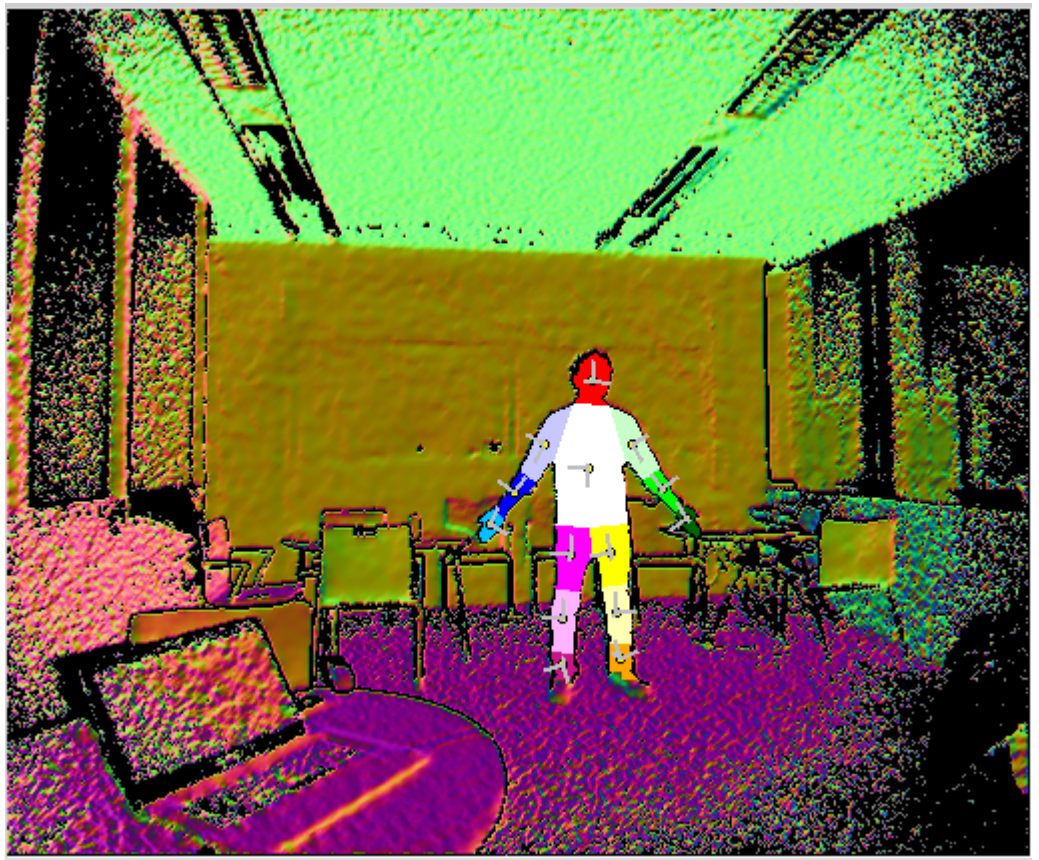


Centers + labels corrected

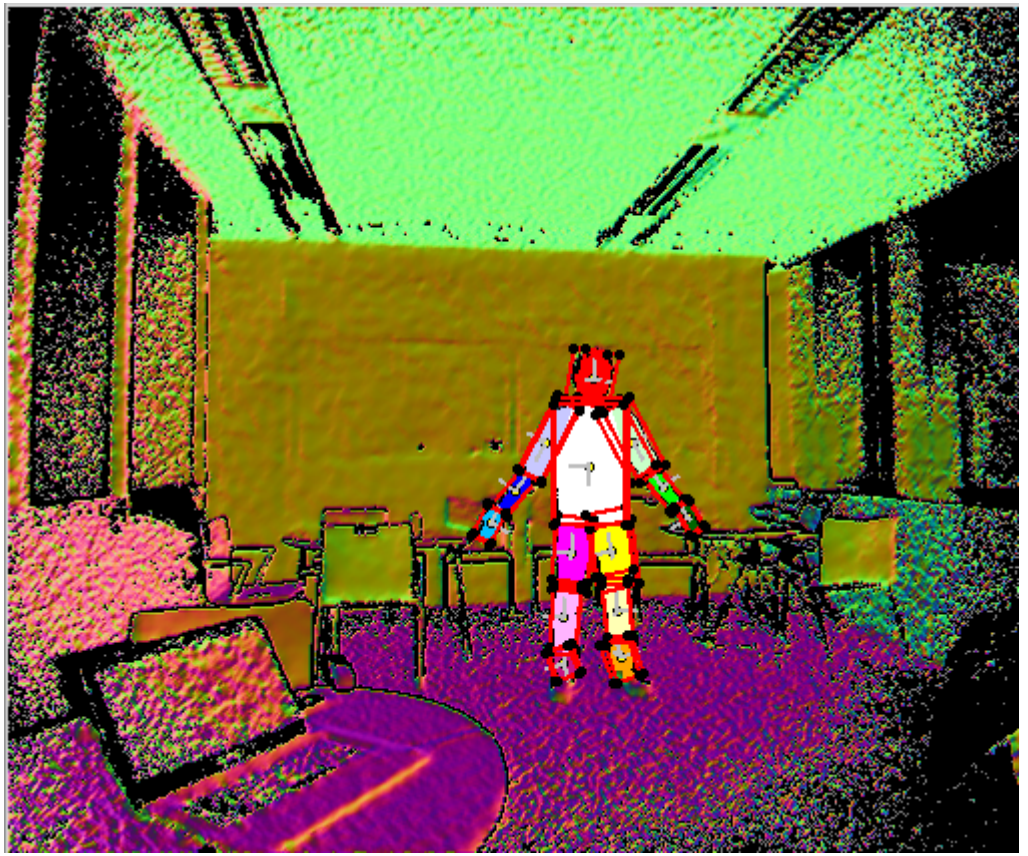
Progress

- Bounding Boxes

Coordinates systems



Bounding Boxes



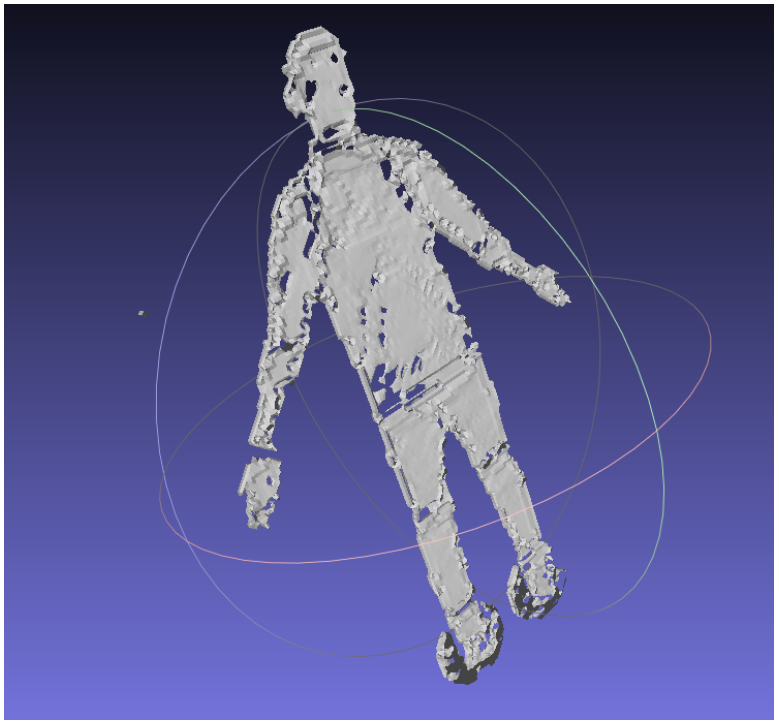
Progress

- PyOpenCL Installed
- Fused segmented body part
  - Segmented TSDF
  - Marching cubes
  - Following two images (no global model)
  - Pose estimation on whole body

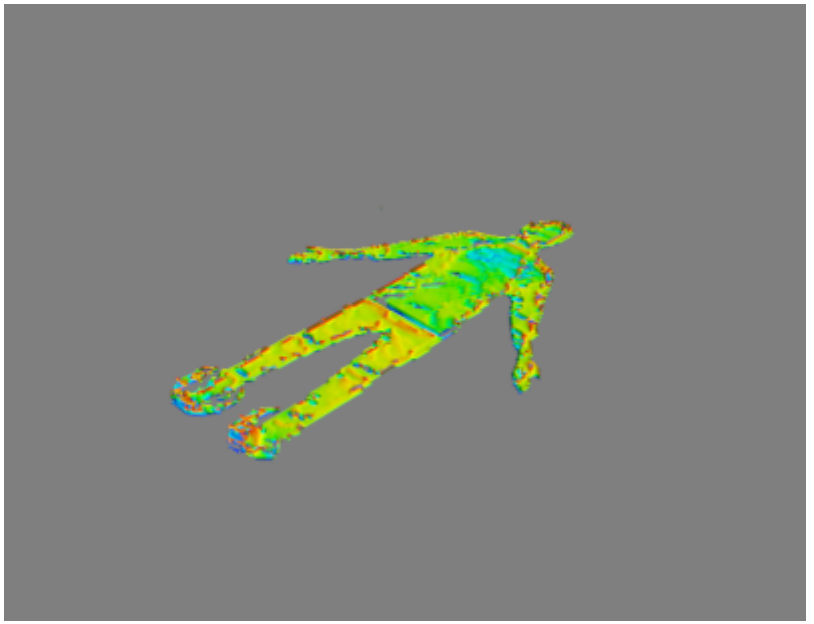
Progress

- Marching cubes : 2 visualizations

MeshLab



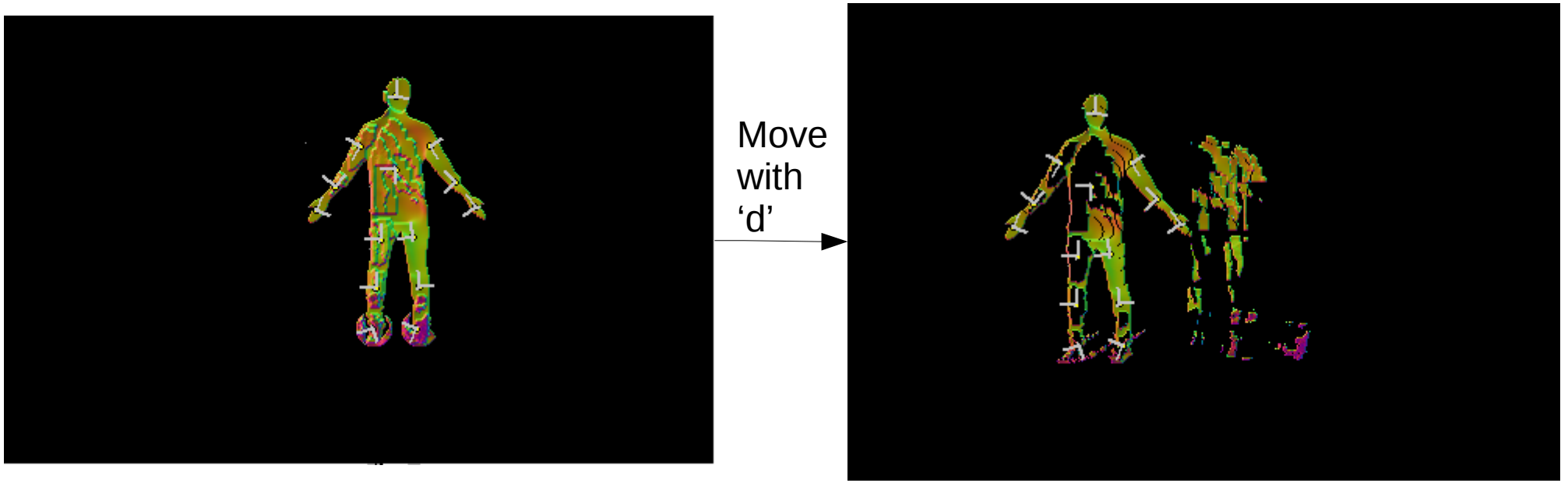
Mayavi



Can select the iso-surface=> change visualization

Progress

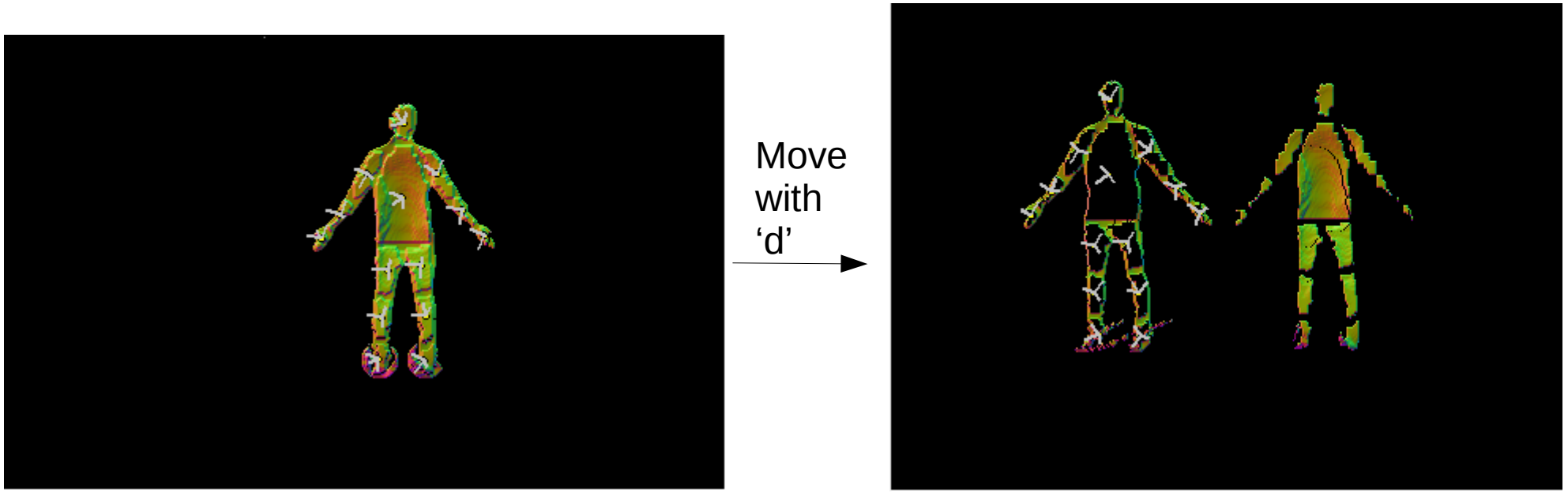
- Fusion of two consecutive images



- Complete reconstruction but not unified
- Time processing : 30~40sec

Progress

- Fusion with global TSDF



- Complete reconstruction but not unified
- Time processing : 2min~2min30sec

Action plan

- Global fusing data for segmented body
  - Debug rendering, fusion with model.
- Get new data for dynamic fusion
  - Install Kinect, Matlab
- If necessary : do something for the feet

Q&A

- Fusion for segmented part : only do the fusion(TSDF)?
- Adapt segmentation for GPU?
- In Global TSDF threshold weight value?
- ‘x’ moves the coordinates systems