NII International Internship program
Segmented Fusion

Tracking

20171020

Sylvia

Advisors: Prof. A.Sugimoto

Ass.Prof. D.Thomas

Last Meeting

- ♣ Previously
  - ♣ Segmentation
- ♣ To-do
  - ♣ Local and global tracking
  - ♣ Robust Non-rigid Motion Tracking Using L0

Guo, Kaiwen, et al. "Robust non-rigid motion tracking and surface reconstruction using l0 regularization." *Proceedings of the IEEE International Conference on Computer Vision*. 2015.

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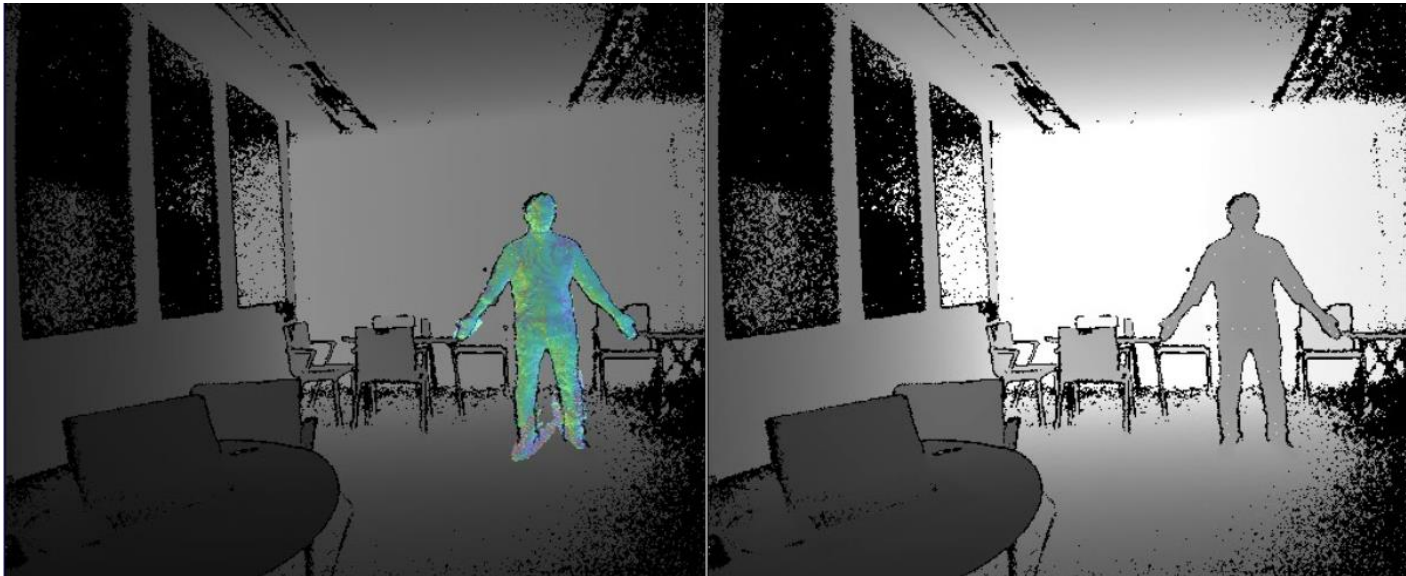
Global Tracking

♣ Since the mistake on the tracking part, the global transform will be done twice in the last version.

♣ When there is large camera motion, the global tracking would failed. Maybe it can be solved by using skeleton translation as initialized transformation. However, this problem will be solve in local tracking automatically.

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Global Tracking

global tracking

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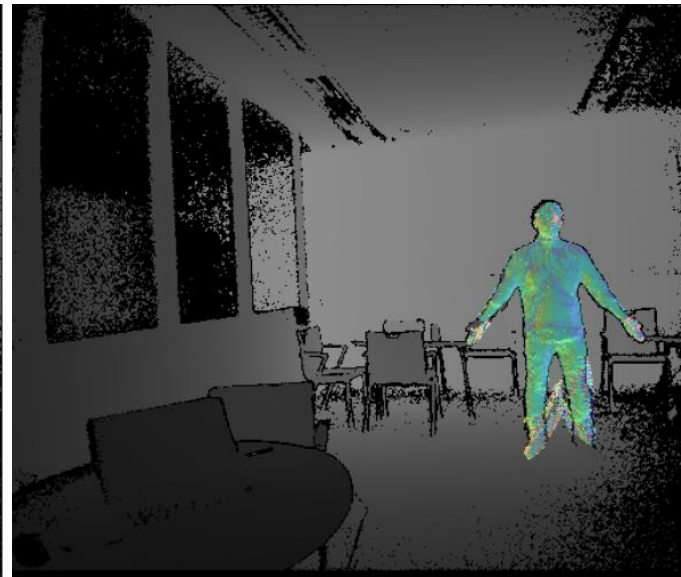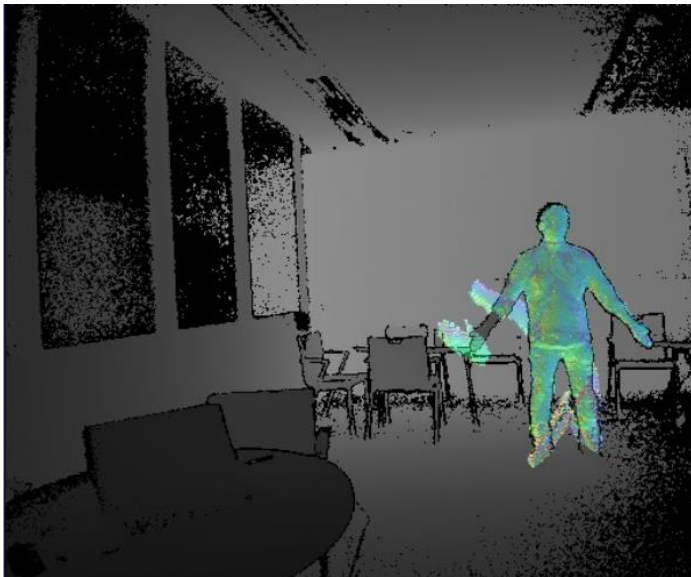Advisors: Prof. A.Sugimoto, Ass.Prof. D.Thomas

Local Tracking

♣ When the junctions of skeleton are not well, the local tracking would failed, especially when the junctions don't have depth value.

previous frame tracking results

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Local Tracking

♣ The result is still not correct at all, since the ICP cannot find the best correspondence in local tracking.

new frame tracking results

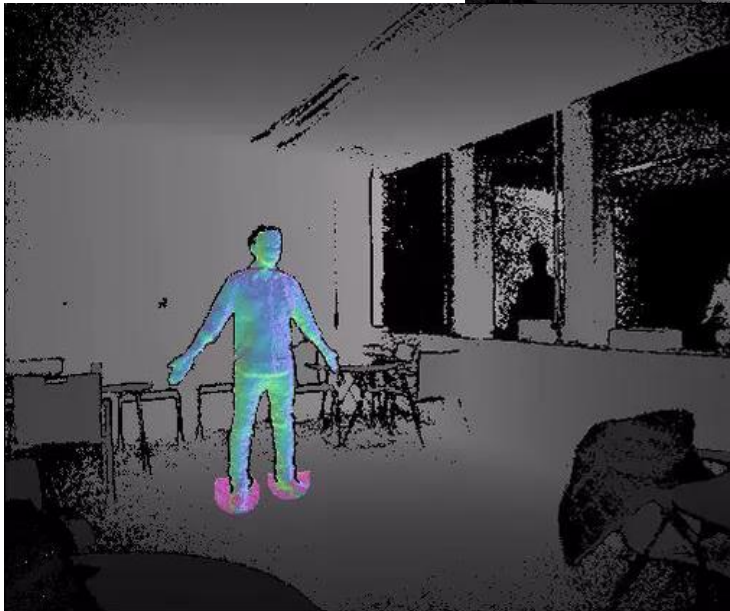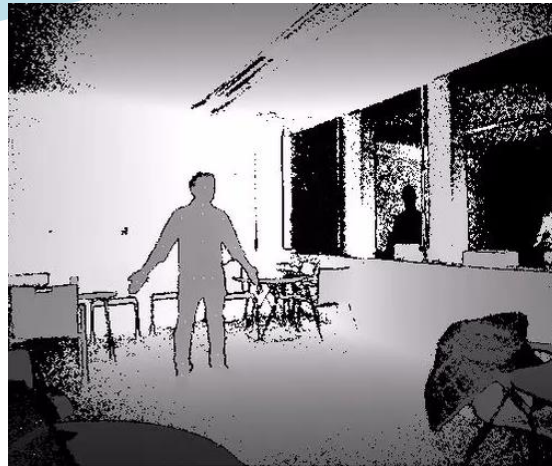old local tracking   new local tracking

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Local Tracking

old local tracking   new local tracking

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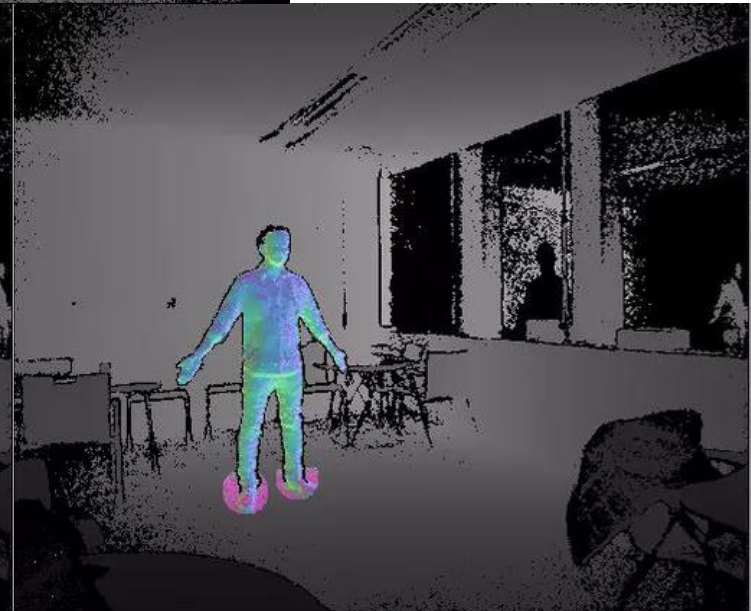
Results

old version   New version
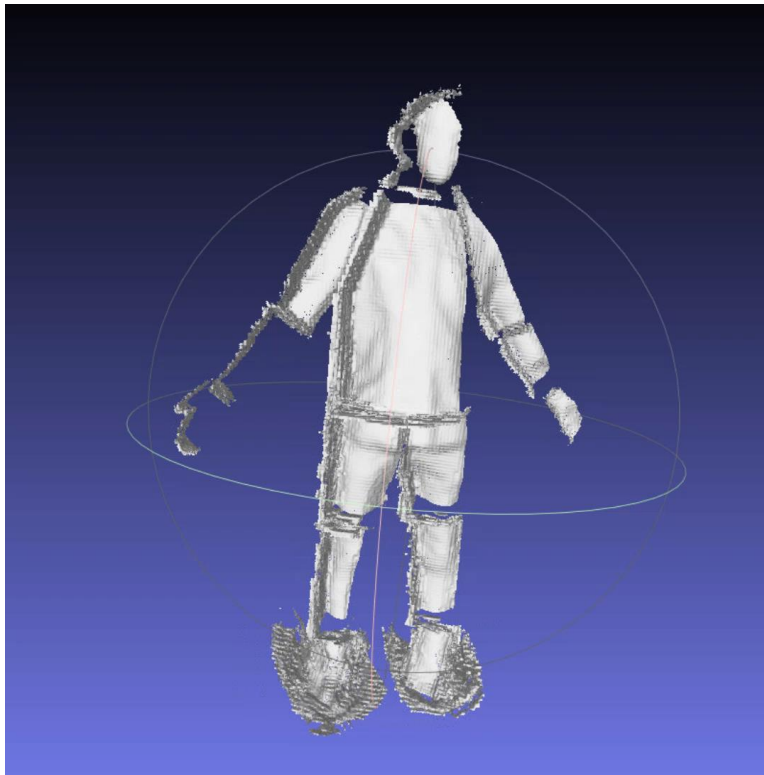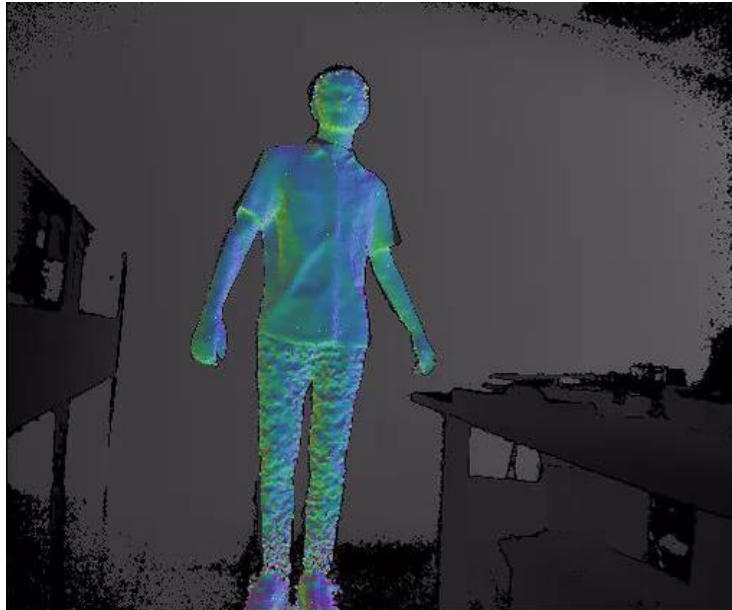
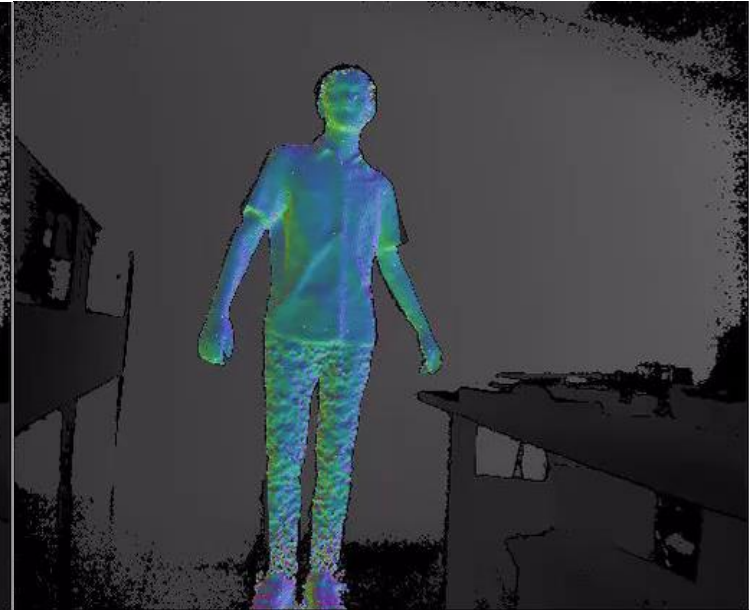Presenter: Sylvia
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Results

old version   New version

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Results

old version   New version
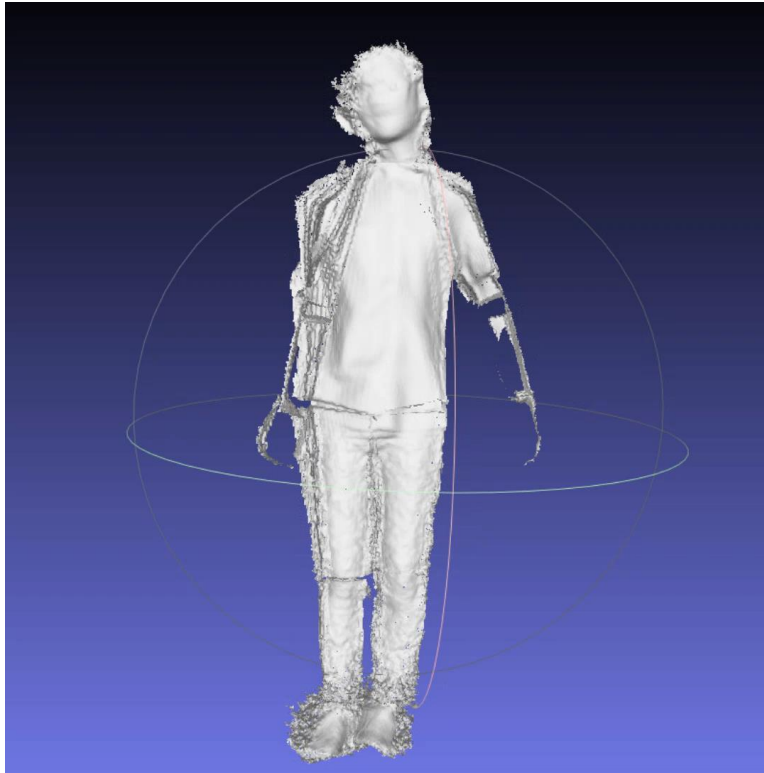
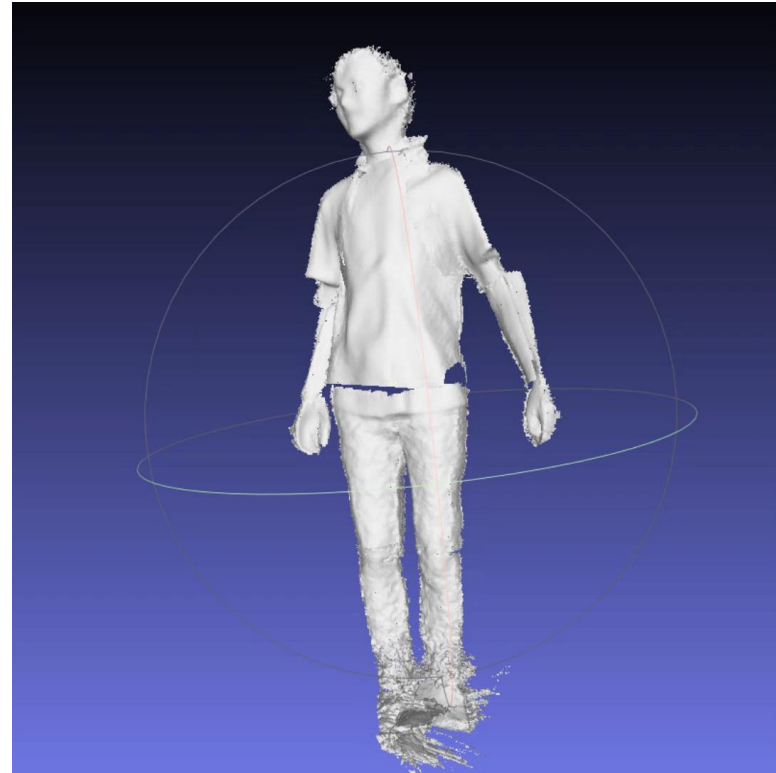Presenter: Sylvia
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Results

old version   New version

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Problem

- ♣ The number of correspondence is zero
- ♣ Weighted ICP is worse

Local and Global tracking

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Next step

- ♣ Solve the problem in ICP
- ♣ Stitching

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