

# NII International Internship program

# Segmented Fusion

Warping method

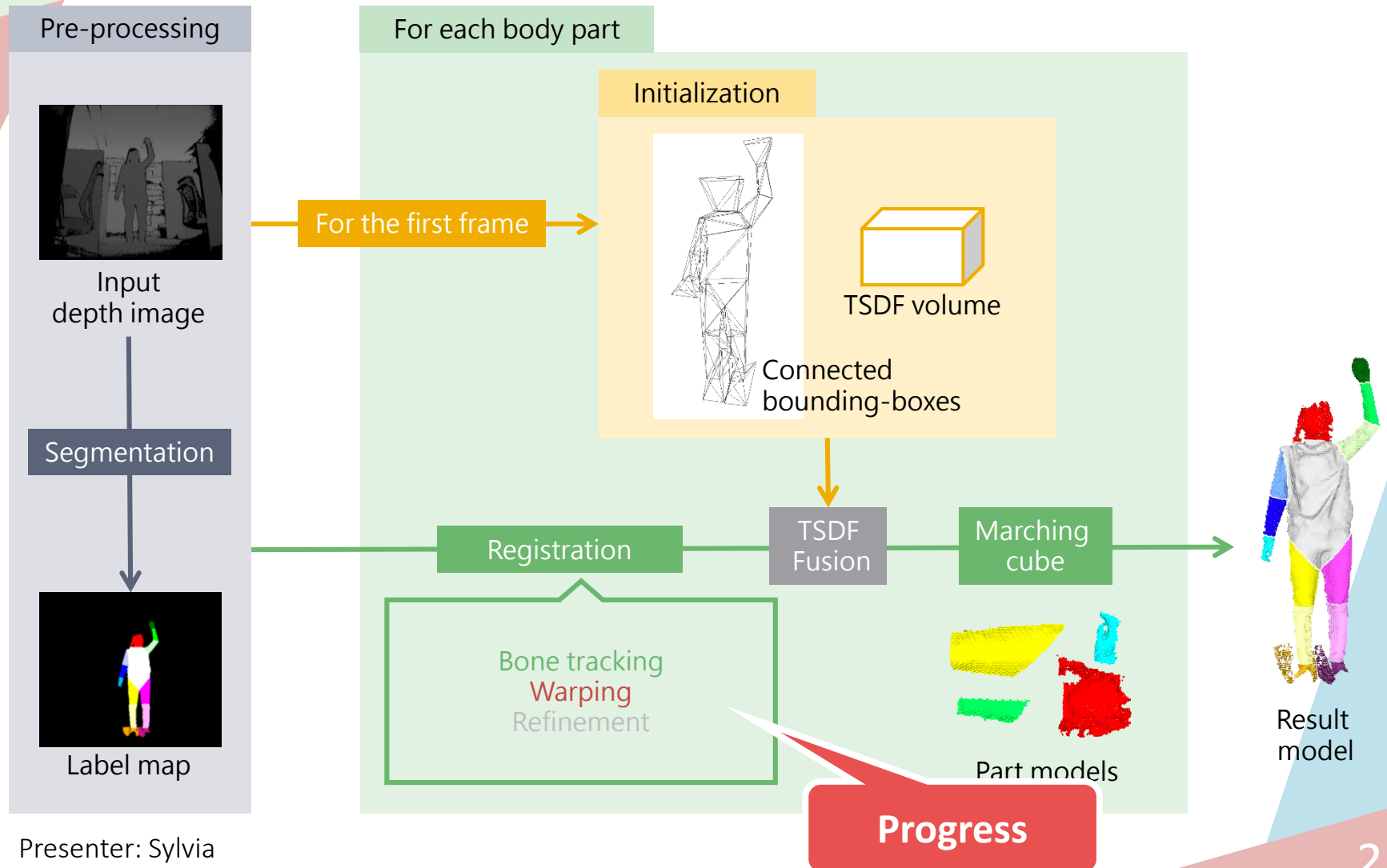
20180117

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Advisors: Prof. A.Sugimoto

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# Summary



Presenter: Sylvia

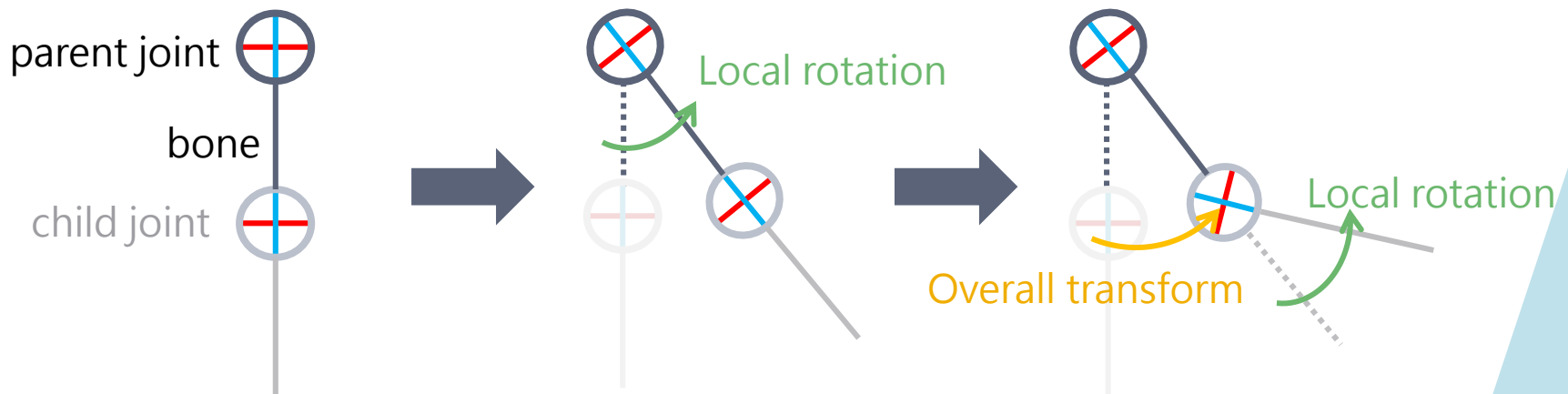
Advisors: Prof. A.Sugimoto, Ass.Prof. D.Thomas

# Summary

- ♣ Previously
  - ♣ Discuss the warping method
- ♣ Progress
  - ♣ Implement dual quaternion skinning
  - ♣ Use heat diffusion as weight to warp vertices

# Warping steps

- ♣ Compute local rotation of each joint, and concatenate it with parent's transform
- ♣ Get the weights of each joint to one vertex according to the distance between joint and vertex
- ♣ Use dual quaternion skinning to blend each vertex



# Heat map

- ♣ Project vertices to bone's vector for each body part and the weight is the distance to end point



# Progress Result



Resource: warping.avi



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



blending result



non-blending result

# Progress Problems

- ♣ The depth value of each joint is not stable
- ♣ The rotation of bone's is not totally correct when there is twist



## Next step

- ♣ Refinement: to make sure the correction of bone's transformation
- ♣ Fusion