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Slicer3 Tutorial

Registration Library Case 05: Knee MRI: model/surface registration

Dominik Meier, Ron Kikinis
Sept. 2010

Introduction

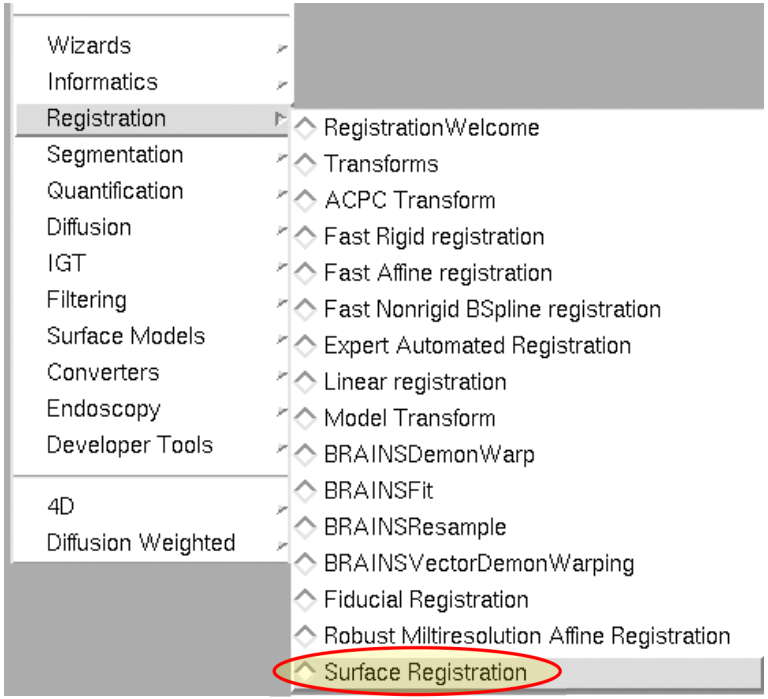
- We have knee MRI images from two separate individuals, incl. segmented femur and tibia from which surface models have been created.
- We seek to roughly align the two spaces for purposes of using presegmented atlases as initial estimates for segmentation
- Because the MRI images themselves provide insufficient contrast for a robust registration, we use the surface models to determine the affine transform.

subject 1

subject 2

Surface based alignment

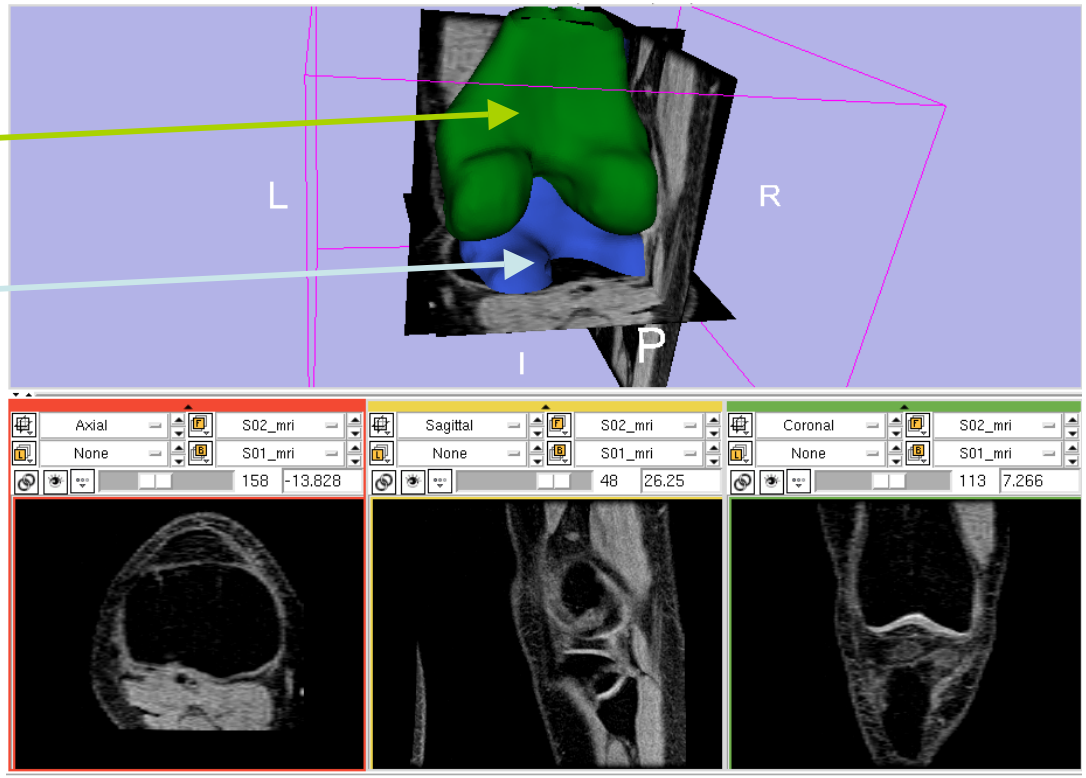
Open the *Surface Registration* module



Surface based alignment

Femur model fo subject 1

Femur model fo subject 2

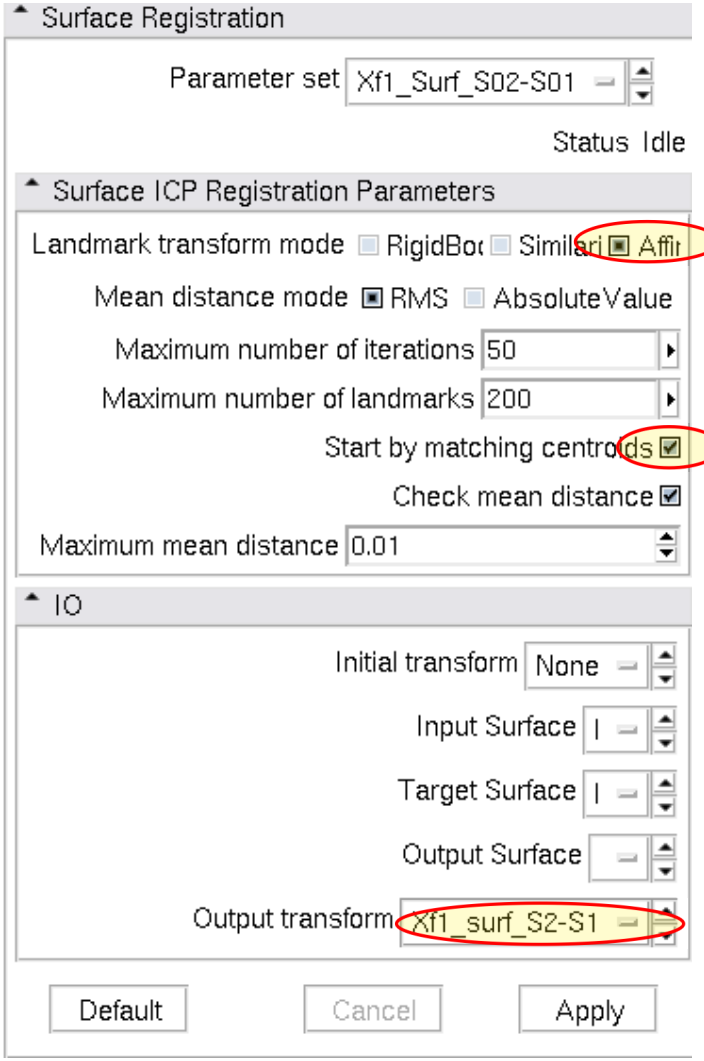


Surface Registration

Input Surface: S02_femur

Target Surface: S01_femur

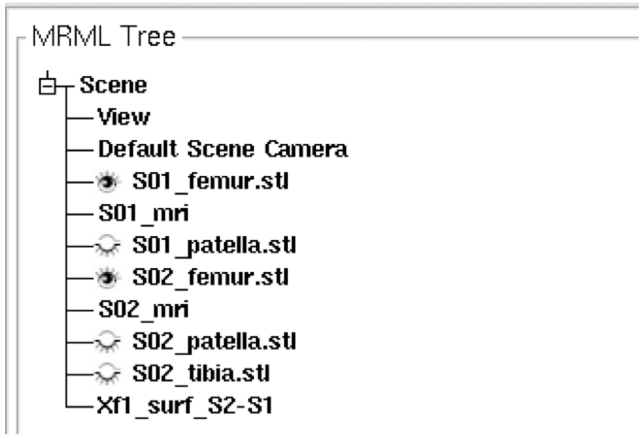
Output Transform: Xf1_surf_S2-S1



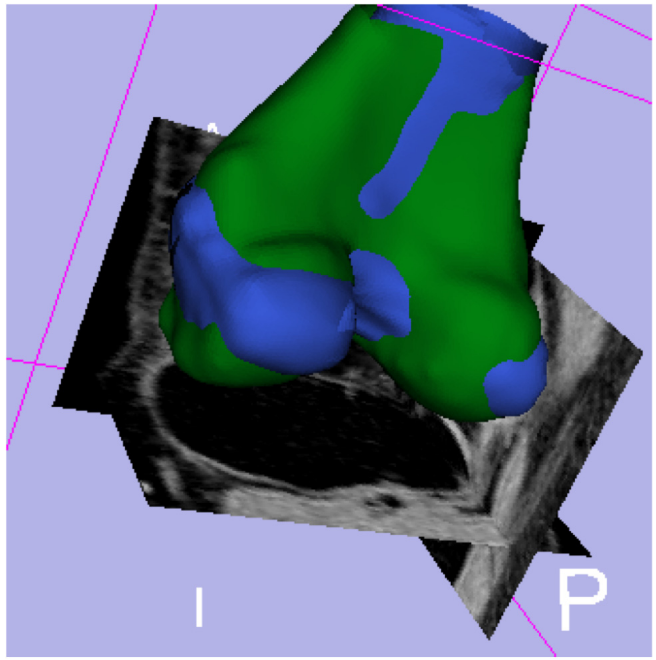
Results

Data Module:

Move S02_femur.stl inside the new transform node to see the result (see animated gif below)



animated gif, view in presentation mode



Acknowledgements

National Alliance for Medical Image Computing
NIH U54EB005149

Neuroimage Analysis Center
NIH P41RR013218 -12S1 (ARRA Suppl)