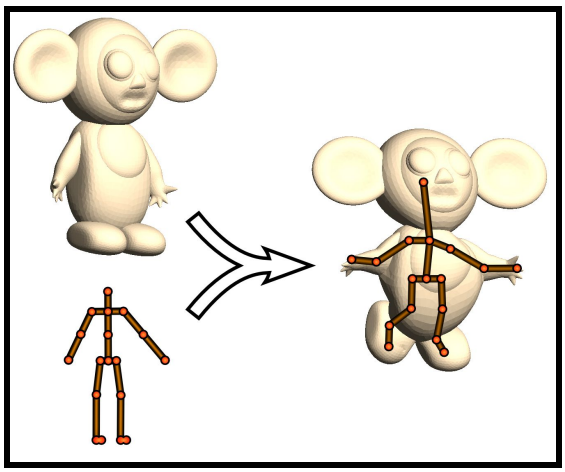
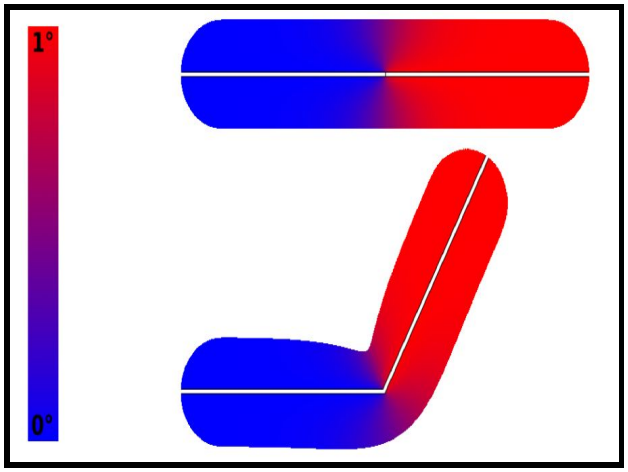
1. A : Central idea:



1. C : Weight computation:



1. B : Procedure:

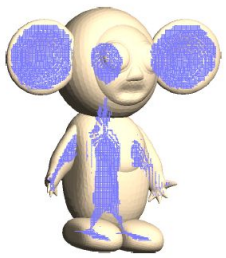


Figure 2: Approximate Medial Surface

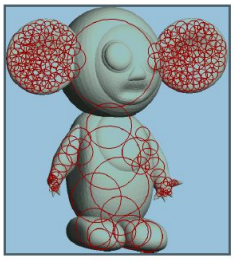


Figure 3: Packed Spheres

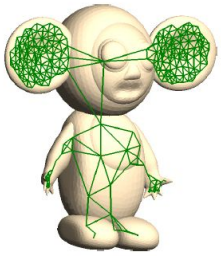


Figure 4: Constructed Graph

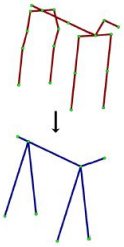


Figure 5: The original and reduced quadruped skeleton

1. D : Examples:

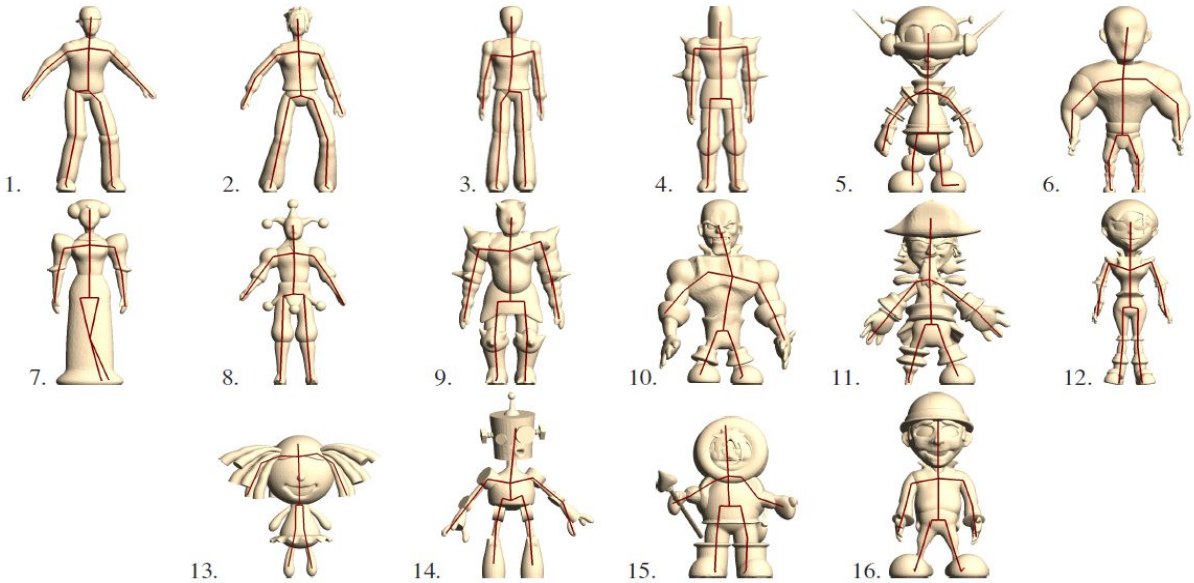
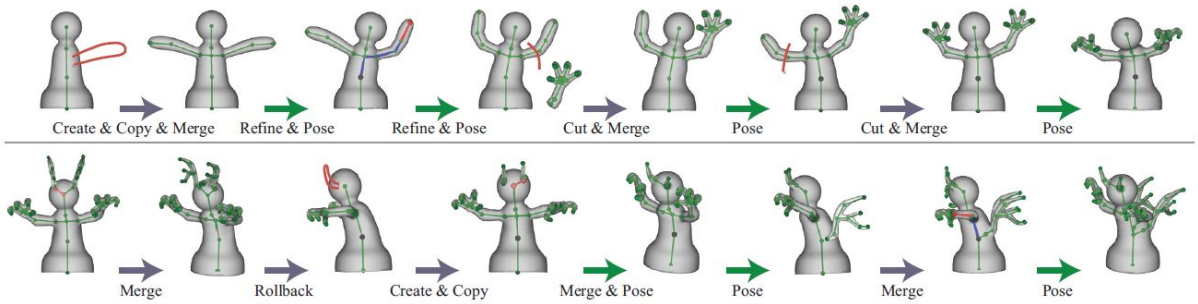
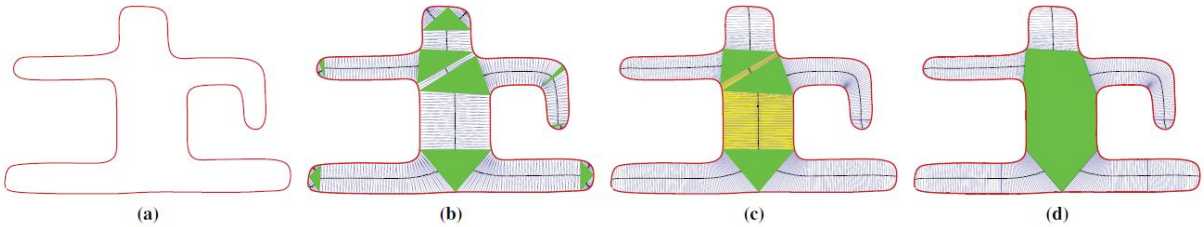


Figure 9: Test Results for Skeleton Embedding

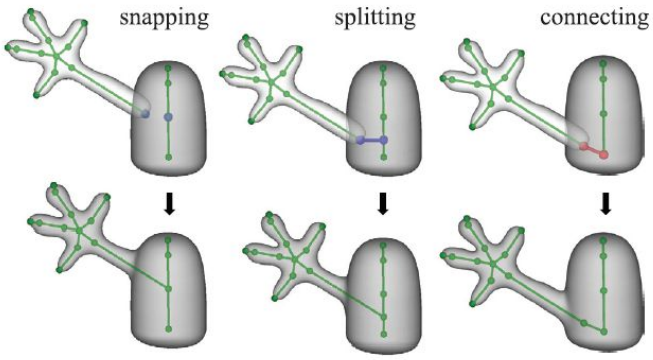
2. A: Complete pipeline:



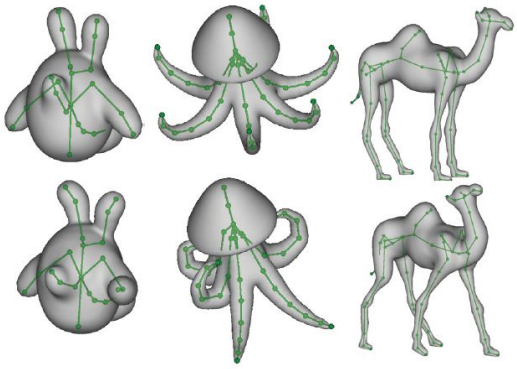
2. B: Base rig formation from silhouette:



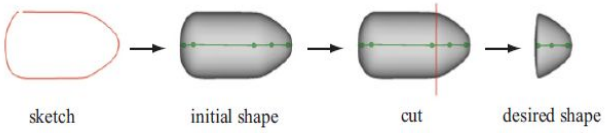
2. C: Types of merges:



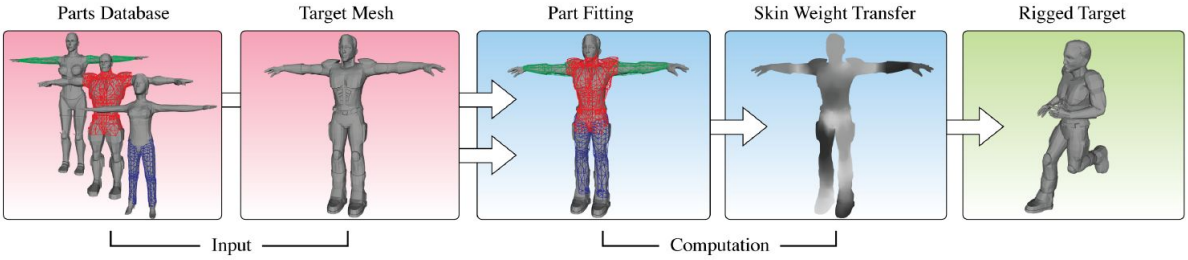
2. D: Examples:



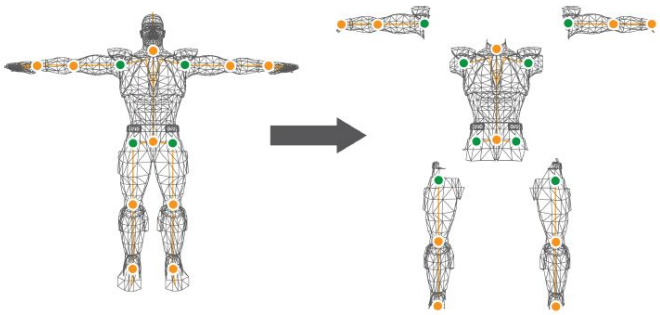
2. E: Limitations:



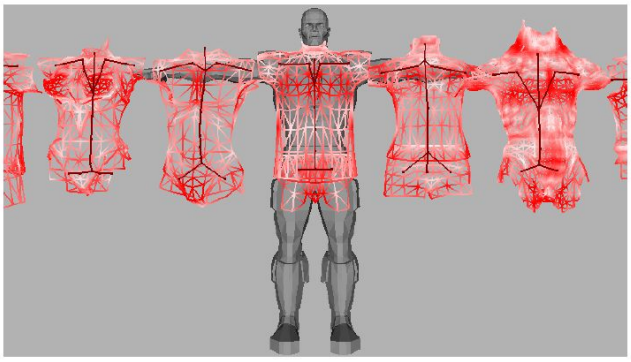
3. A: Complete pipeline:



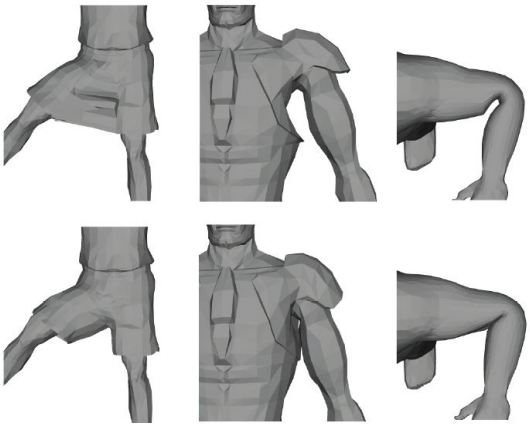
3. B: Part separation:



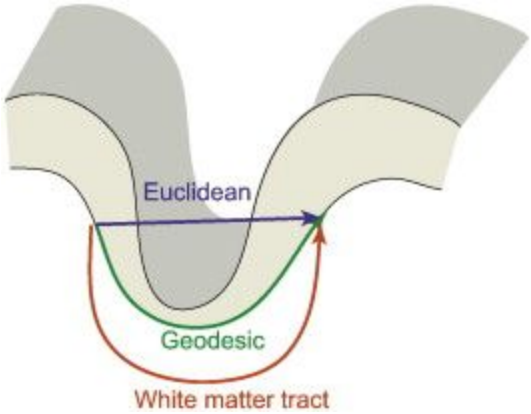
3. C: Human selection



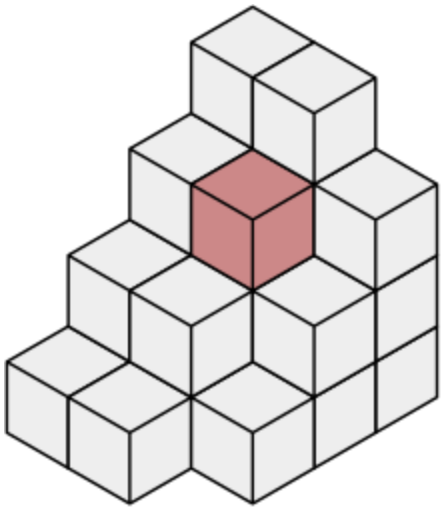
3. D: System output:



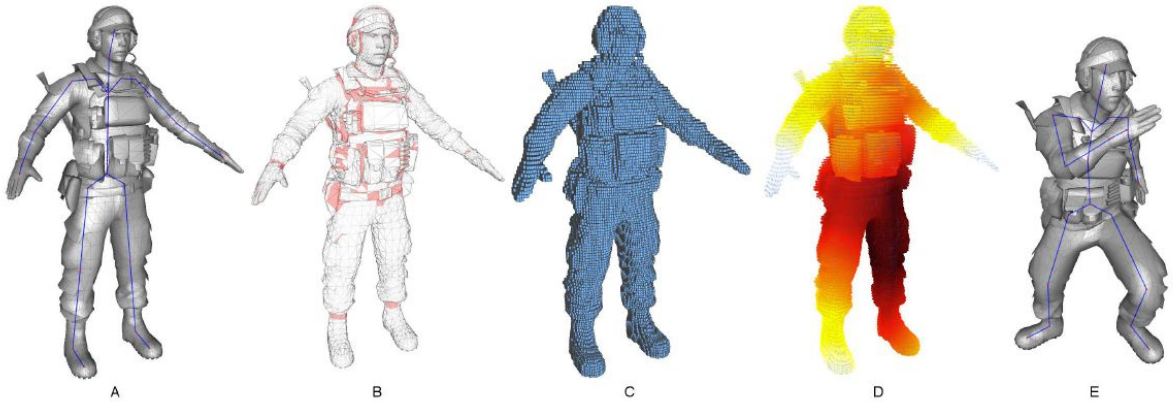
4. A: Geodesic distance:



4. B: Voxel:



4. C: Complete pipline:



4. D: Comparison with other methods:

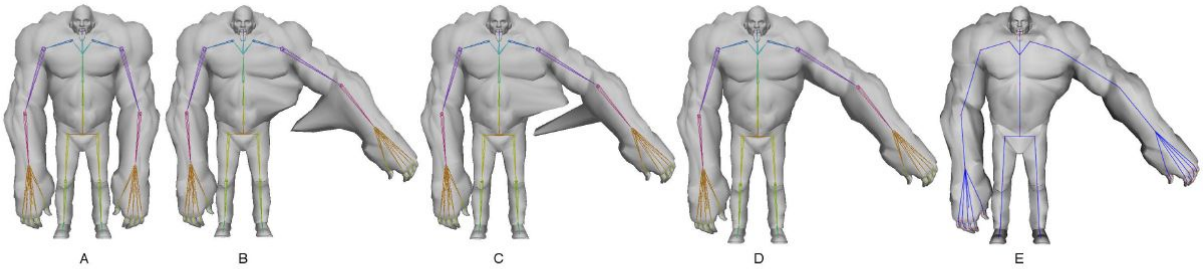
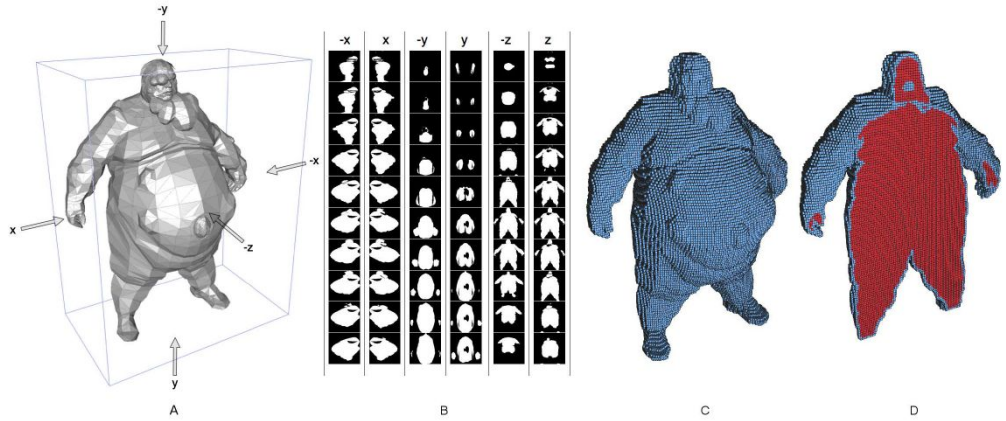
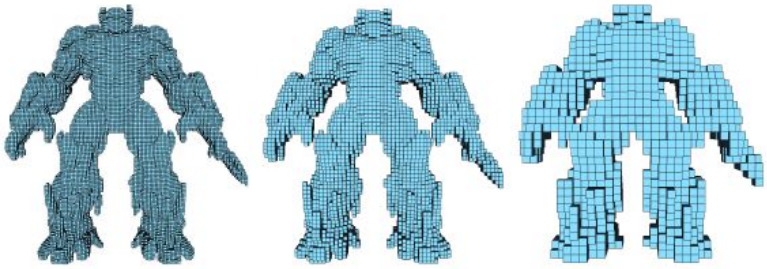


Figure 2: *Comparison of other automatic weighting schemes (B-D) with our method (E). (A) Initial bind pose. (B) Closest distance (Maya) (C) Closest hierarchy (Maya) (D) Heat map weighting [Baran and Popović 2007] (E) Geodesic voxel binding. Distance-based methods that ignore mesh structure (B,C) can produce severe artifacts. For watertight meshes we obtain similar results to Heat map weighting (D,E). See Figure 8 for more complete discussion.*

4. E: Voxelization



4. F: Changing the voxel resolution



4. G: Comparison with Pinocchio method:

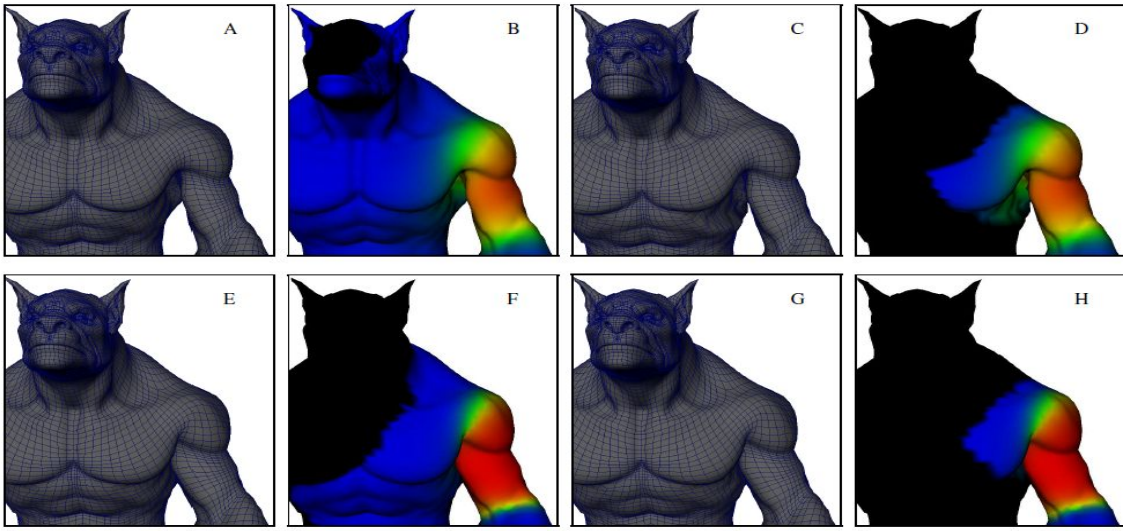
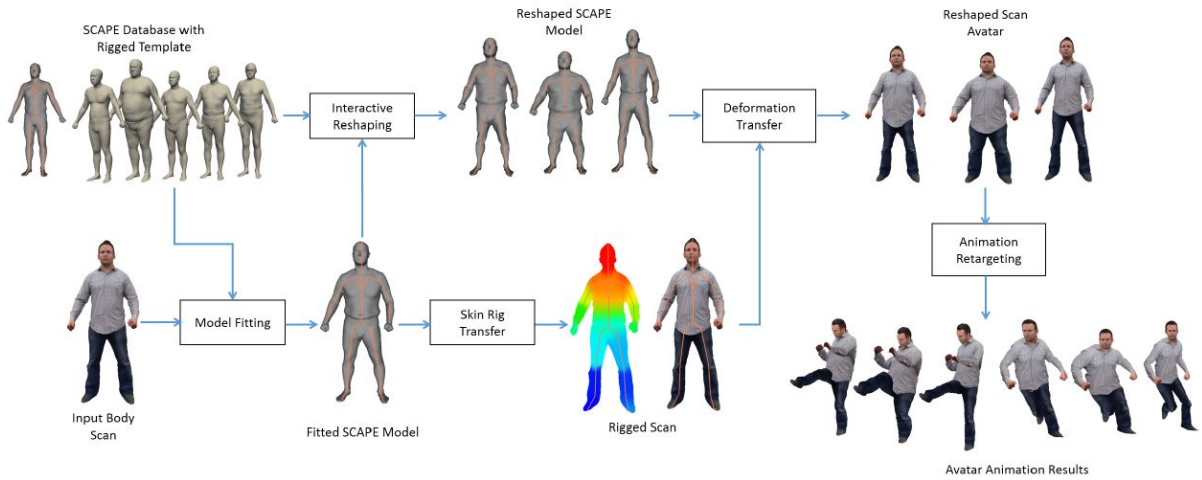


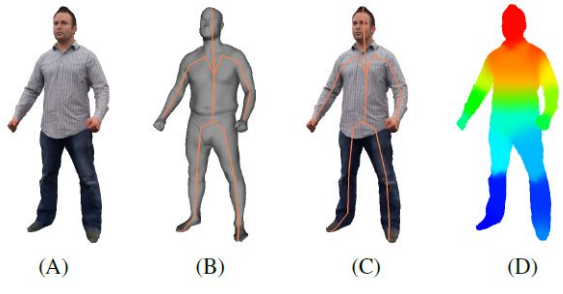
Figure 8: *Comparison with Baran et al. [2007] (A-D) with our method (E-H). On watertight meshes Baran's method generates appealing results (A) but yields many small weights far from the joint of interest (B). When the number of weights is limited (D), as is often done in games to enable vectorization, artifacts may be visible (C) (e.g., see armpit region). Our method produces visually indistinguishable results (E) with few small weights (F). Because we concentrate most influences on bones near the joints (H), limiting influences does not introduce problems (G). Results shown use* $\alpha = 0.7$.

5. A: System overview:

5. B: Complete process:



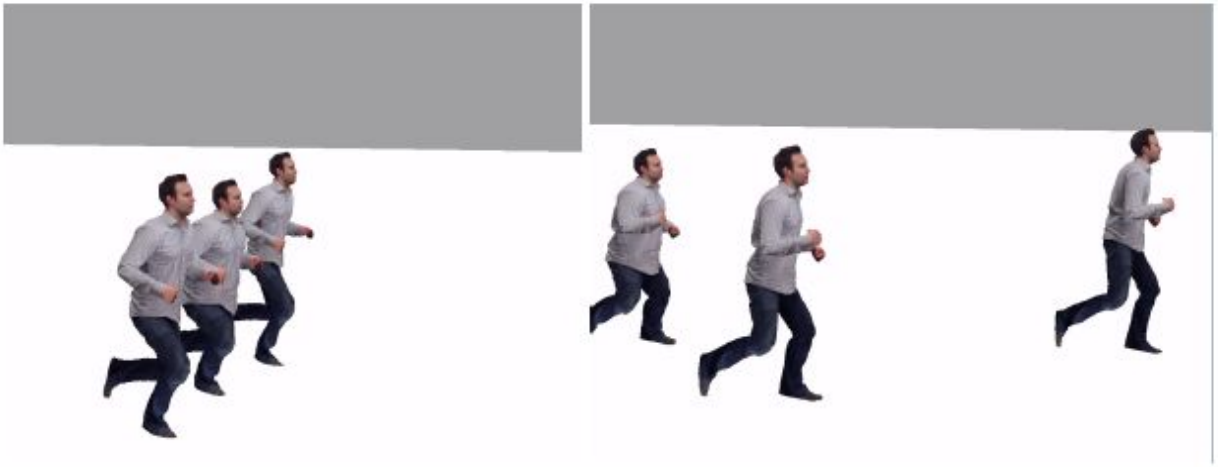
5. C: Model fitting:



5. D: Reshaping:

5. E: Comparison with PInocchio:

5. F: Effect of sizes on animation:



LINKS:

1. https://www.youtube.com/watch?v=EkIzamItEgM
2. https://www.youtube.com/watch?v=1prInV9ZNY0
3. https://vimeo.com/17851679
4. https://vimeo.com/69268846
5. https://www.youtube.com/watch?v=2aPHcvBQ6U0