

Introduction to Character skinning

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EVASION-LJK

Skinning

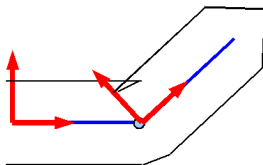
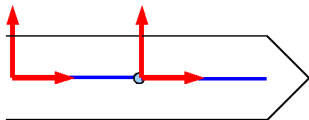
- Attach a mesh to an articulated skeleton
- Continuous mesh deformations



Why trivial methods do not work

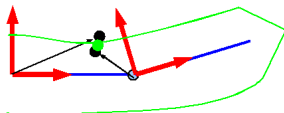
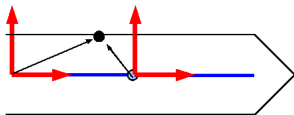
Attach each vertex to the closest solid

- Discontinuities
- Self-intersections



Basic idea :

- Record vertex position in the closest solids
- Apply a weighted sum

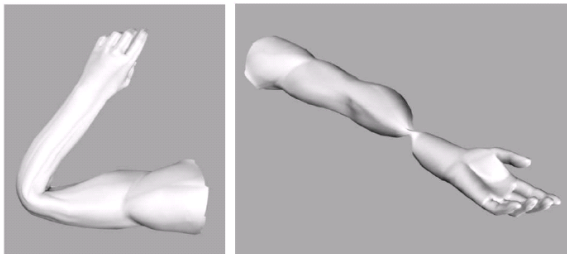


Difficulties :

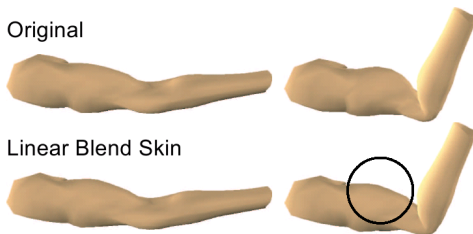
- Which solids to use ?
- Which weights ?

Problems

Extreme deformations :

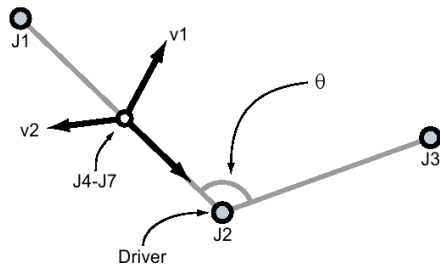


Lack of artistic control



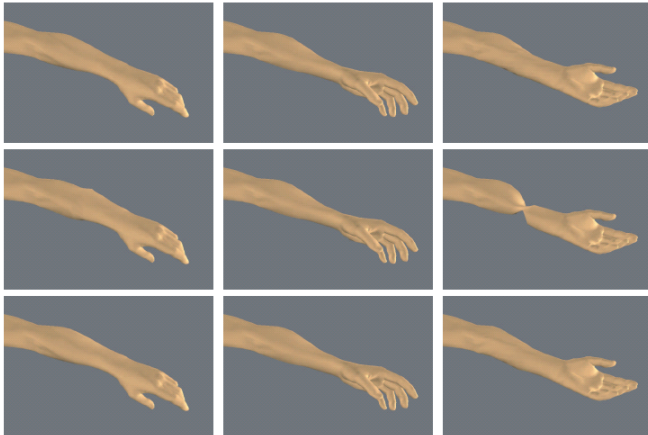
Mohr and Gleicher's approach

- Additional solids where needed



- Optimize the weights over the complete motion, based on artistic input

Excessive deformations avoided due to additional solids

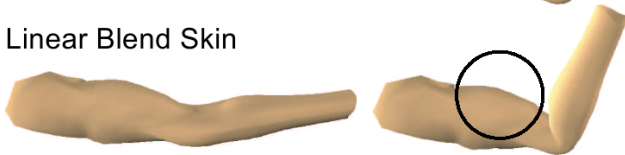


Artistic control matched using optimization

Original



Linear Blend Skin



Our Method

