

Technical Animation

February 6, 2021

1 Introductions

TAG: TechnicalAnimation

Interesting 1. TA Arjun is interested in PDEs and numerical simulation.

Remark 1. Course Website:

<http://graphics.cs.cmu.edu/nsp/course/15464-s21/www/>

Computer Animation: Algorithms and Techniques is the course textbook. In drive.

Question 1. Does greater physical simulation accuracy lead to a less palatable viewing experience?

Answer 1. Not sure but often directors will personify animations and we have different parameters to give different personifications. For example "angry storm".

Answer 2. It seems exaggerated motion is often more digestible (think actors for example). Often used actors in motion capture

Interesting 2. Rig Net: automatically rigging meshes. Note: rigging is process of jointing meshes, providing structure/skeleton.

Remark 2. Beginning of rigging: find medial axis of geometry and impose some structure.

1.1 Examples in Practice

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Remark 3. L-systems developed to describe plant structures and generation.

Remark 4. Tools for good animation: The Animators Survival Kit.

Remark 5. Idea behind rigging: for easy animating want ball control points you can manipulate for convenience.

Remark 6. Cloth simulation involves a mesh... Cloth intersection problems in Pixar's Coco:

https://www.researchgate.net/publication/326907399_Better_collisions_and_faster_cloth_for_Pixa

Remark 7. Traditional animation: keyframing.

New variant: procedural animation. Often used for crowd animation.

Interesting 3. Interesting site:

www.massivesoftware.com

Interesting 4. Character controller using Motion VAEs interesting.