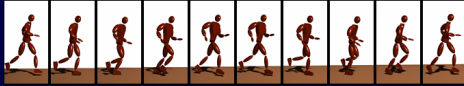


Motion Capture



Magnetic Capture Systems

- Tethered
- Sensitive to metal
- Low frequency (60Hz)



2

Mechanical Capture Systems

- Any environment
- Measures joint angles
- Restricts the motion



3

Optical Capture Systems

- 8 or more cameras
- Restricted volume
- High Frequency (240Hz)
- Occlusions



4

Captured Motion

- Sampled DOFs through time gathered from the real world
- Rich and realistic
- Hard to edit [Witkin, Popović, Gleicher, Bruderlin]



5

Optical motion capture process

1. Perform a motion trial
2. Triangulate camera views to compute marker positions
3. Identify and uniquely label markers
4. Fill in the occluded marker paths
5. Use IK to calculate joint angles from marker paths

6

Motion Warping Drawbacks

- Works well only for small deformations
- No high-level editing constructs

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