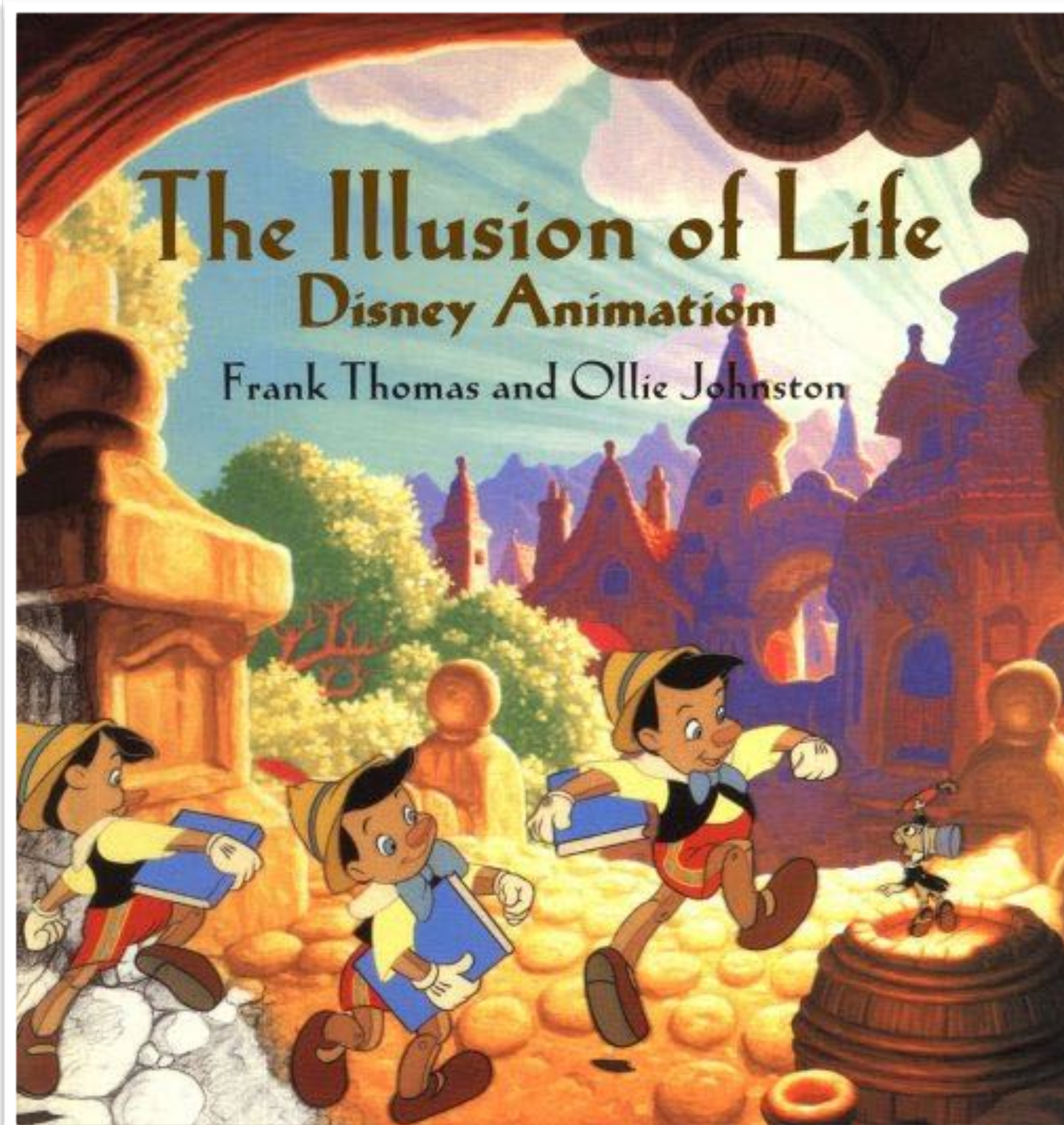


Animation



12 Principles of Animation



Olli Johnston; Frank Thomas (1981): *The Illusion of Life: Disney Animation*

1. Squash and Stretch
2. Anticipation
3. Staging
4. Straight Ahead Action and Pose to Pose
5. Follow Through and Overlapping Action
6. Slow In and Slow Out
7. Arc
8. Secondary Action
9. Timing
10. Exaggeration
11. Solid drawing
12. Appeal

Sprite

ZERLEGUNG EINES SPRITES IN BYTEWERTE												
ZEILE	BIT NR.				BIT NR.				BIT NR.			
	7	6	5	4	3	2	1	0	7	6	5	4
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												

Eine im Speicher codierte Bitmap,...



...die auf dem Bildschirm an variablen Koordinaten ausgegeben werden kann

Sprite Animation



Dynamisches Wechseln der Sprite-Bitmap

Sprite Scaling



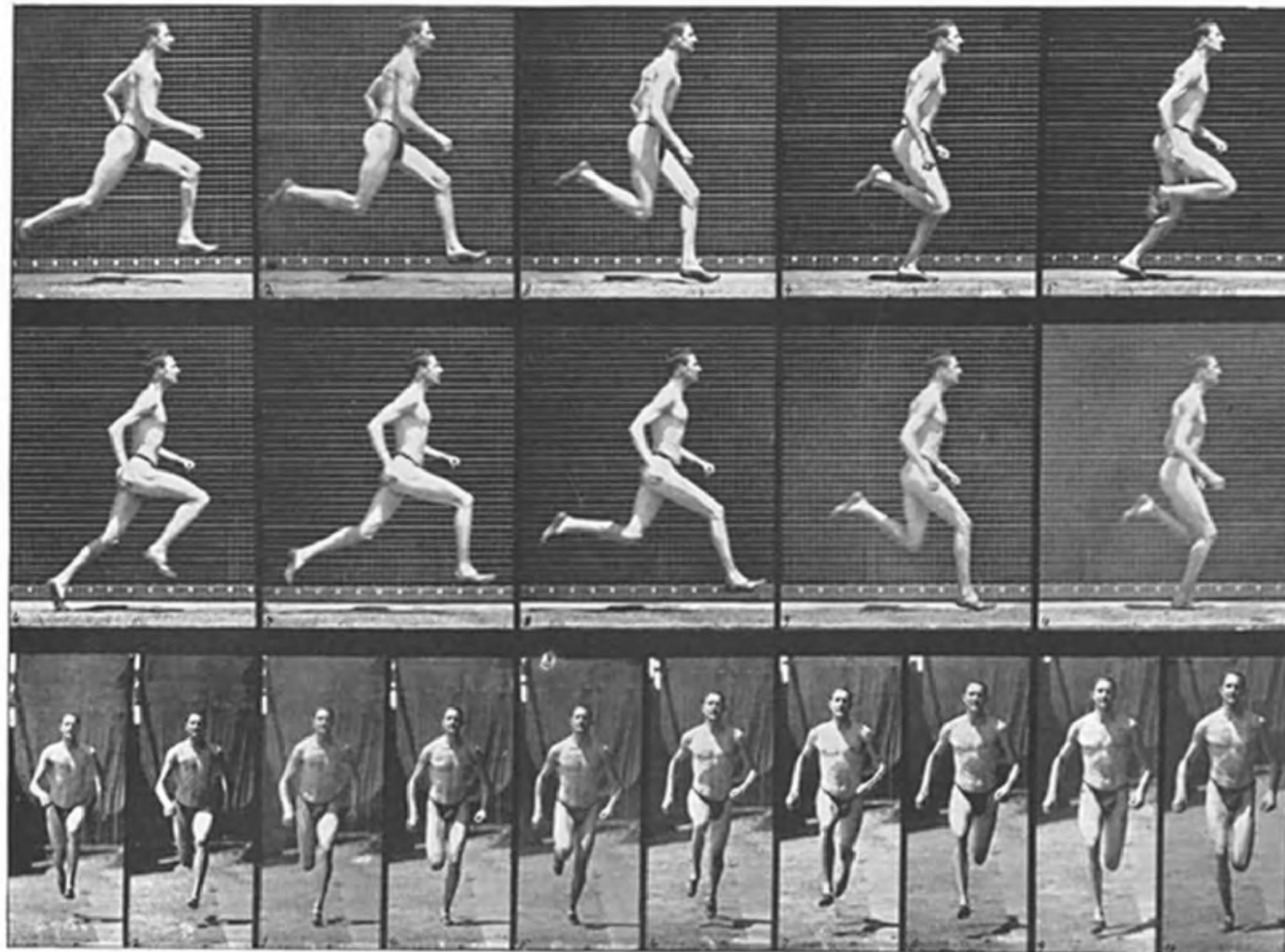
After Burner 1987



Doom 1993

Rotoscoping

THE HUMAN FIGURE IN MOTION.



Copyright, 1887, by Eadweard Muybridge.

ATHLETE. RUNNING.

→ SERIES 10.

PHOTOGRAPHED SYNCHRONOUSLY FROM TWO POINTS OF VIEW.

Model 37.

Time-intervals: .042 second.

For some similar phases, from the original work, see page 201.

Games with sprites (possibly) based on Eadweard Muybridge motion study photography

Decathlon, Microsoft 1982



START

Summer Games II, EPYX 1986 (flipped horizontally)



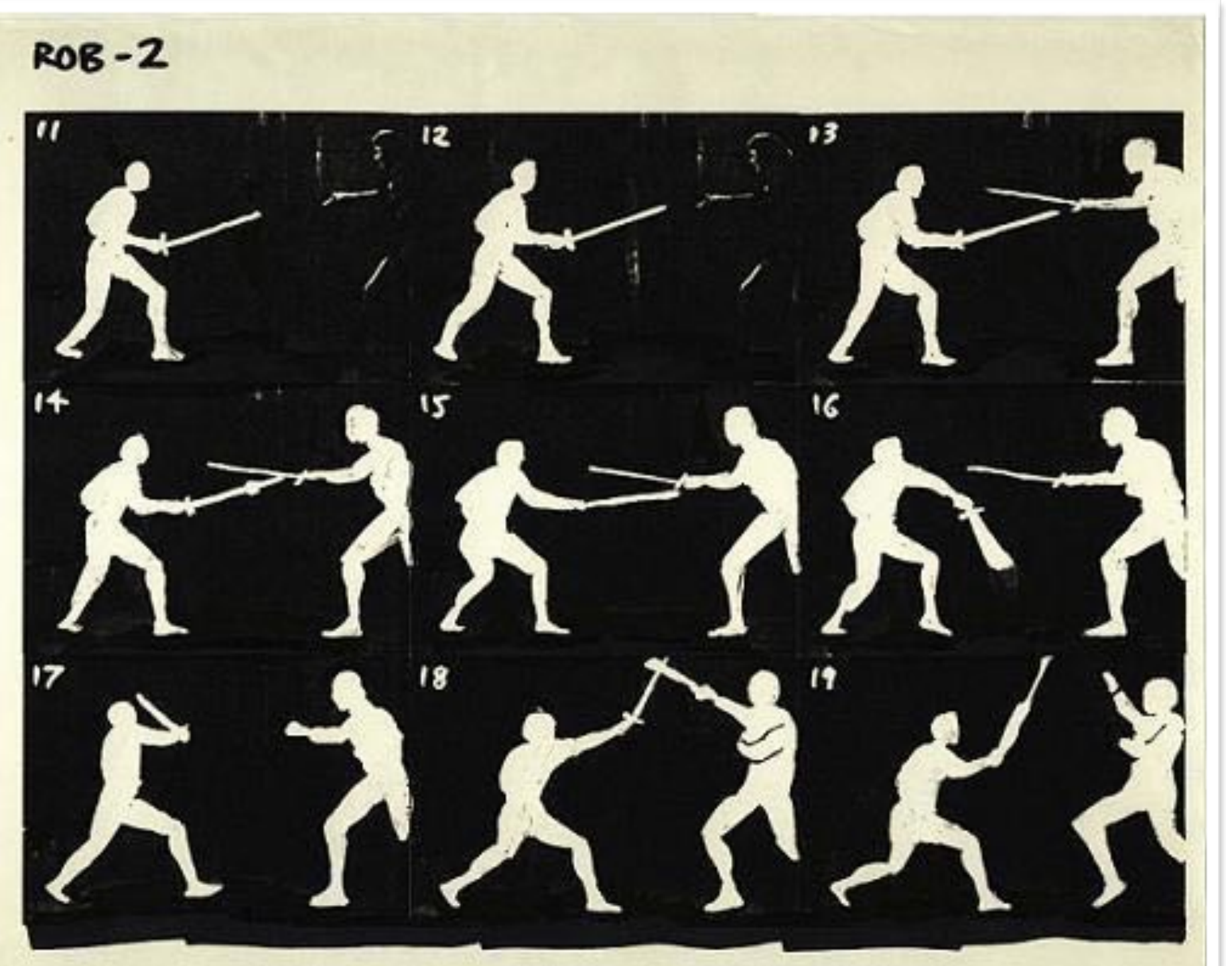
Impossible Mission II, EPYX 1988 (EGA graphics)



BdR 2013

Edward Muybridge (1907)

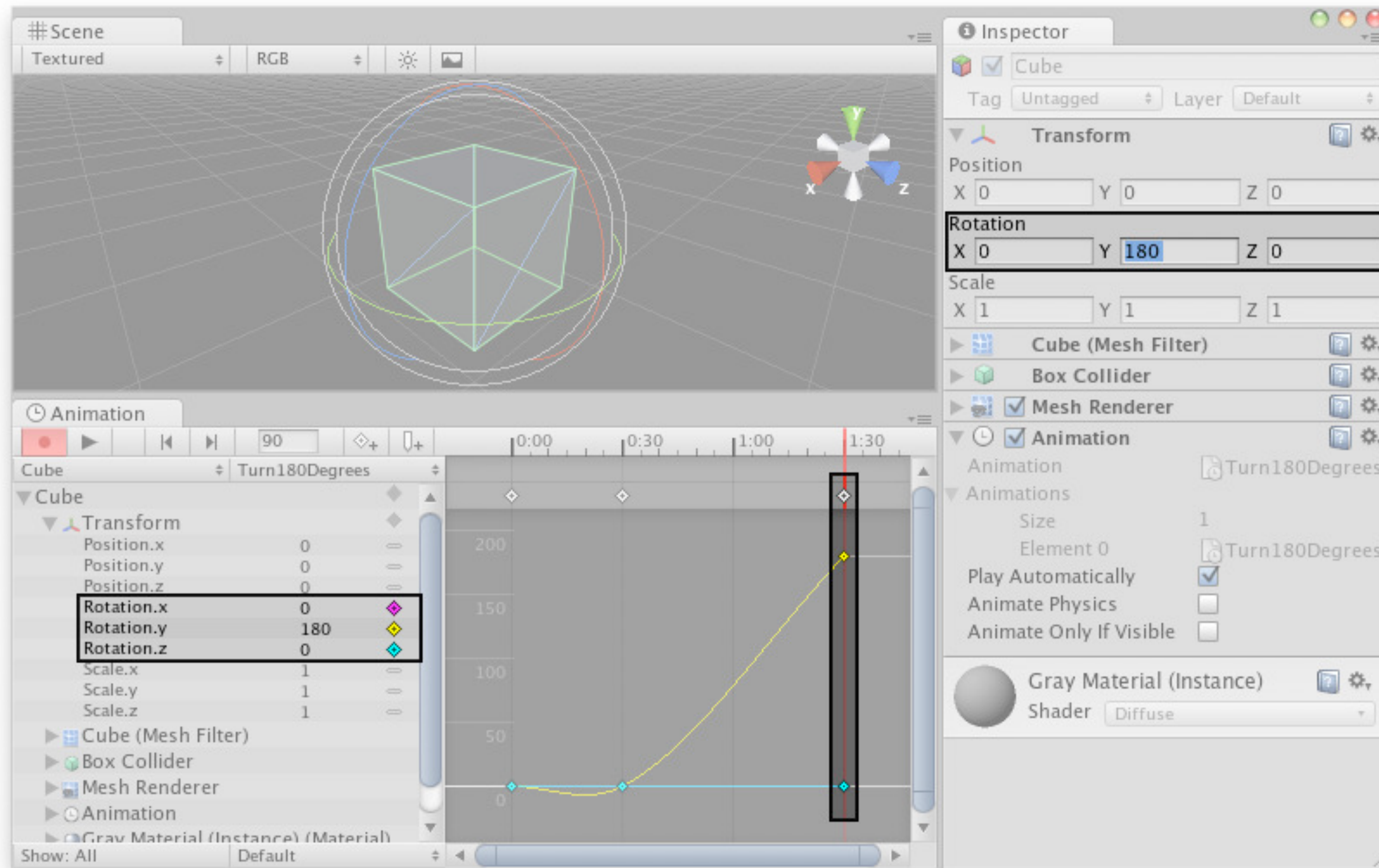
Rotoscoping



Prince of Persia 1989

https://archive.org/details/msdos_Prince_of_Persia_1990

Keyframe-Animation





WOLF

WIN



26"76



JEFFRY

WIN



ROUND 2

30"22

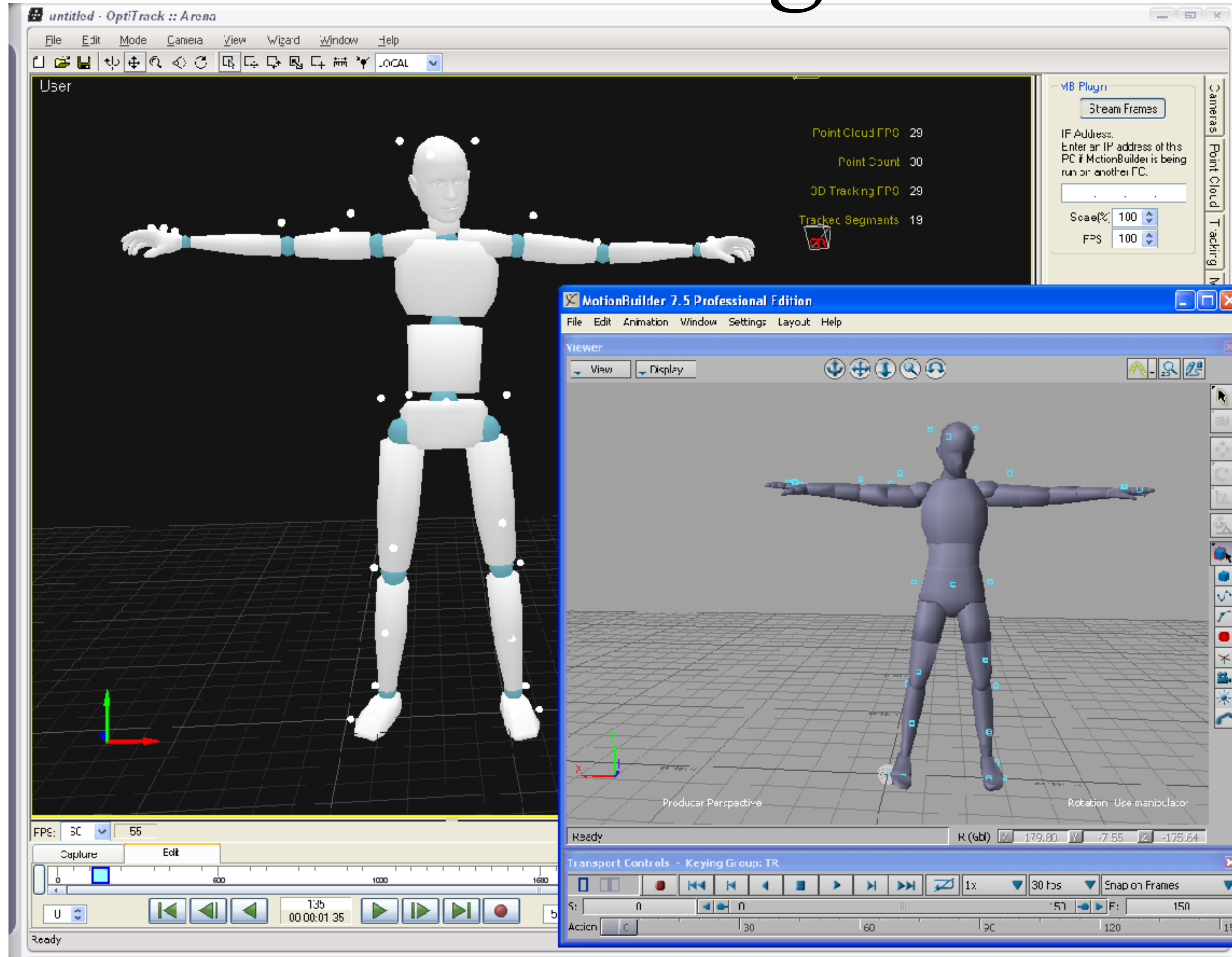
Motion Capturing



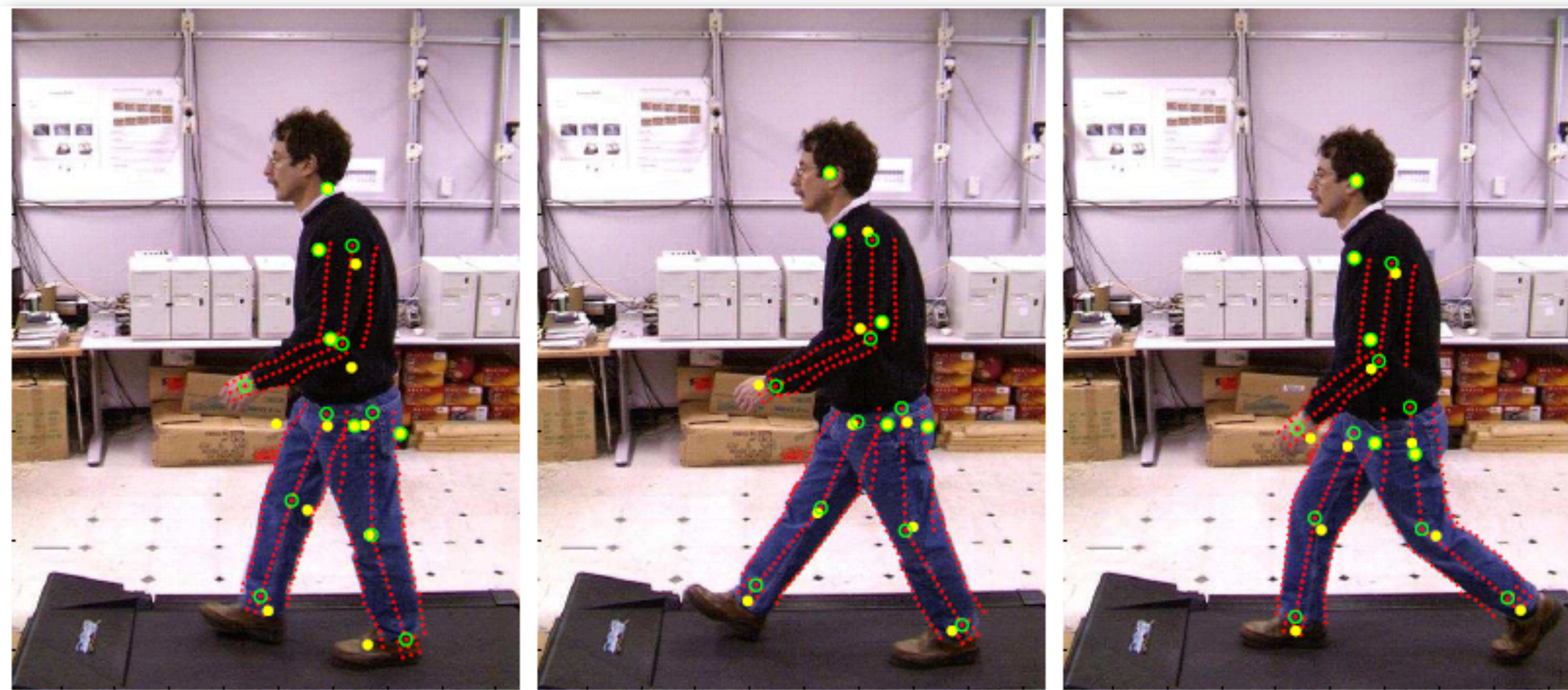
Rise of the Robots 1994

https://www.youtube.com/watch?time_continue=118&v=dGUhpRW4fic

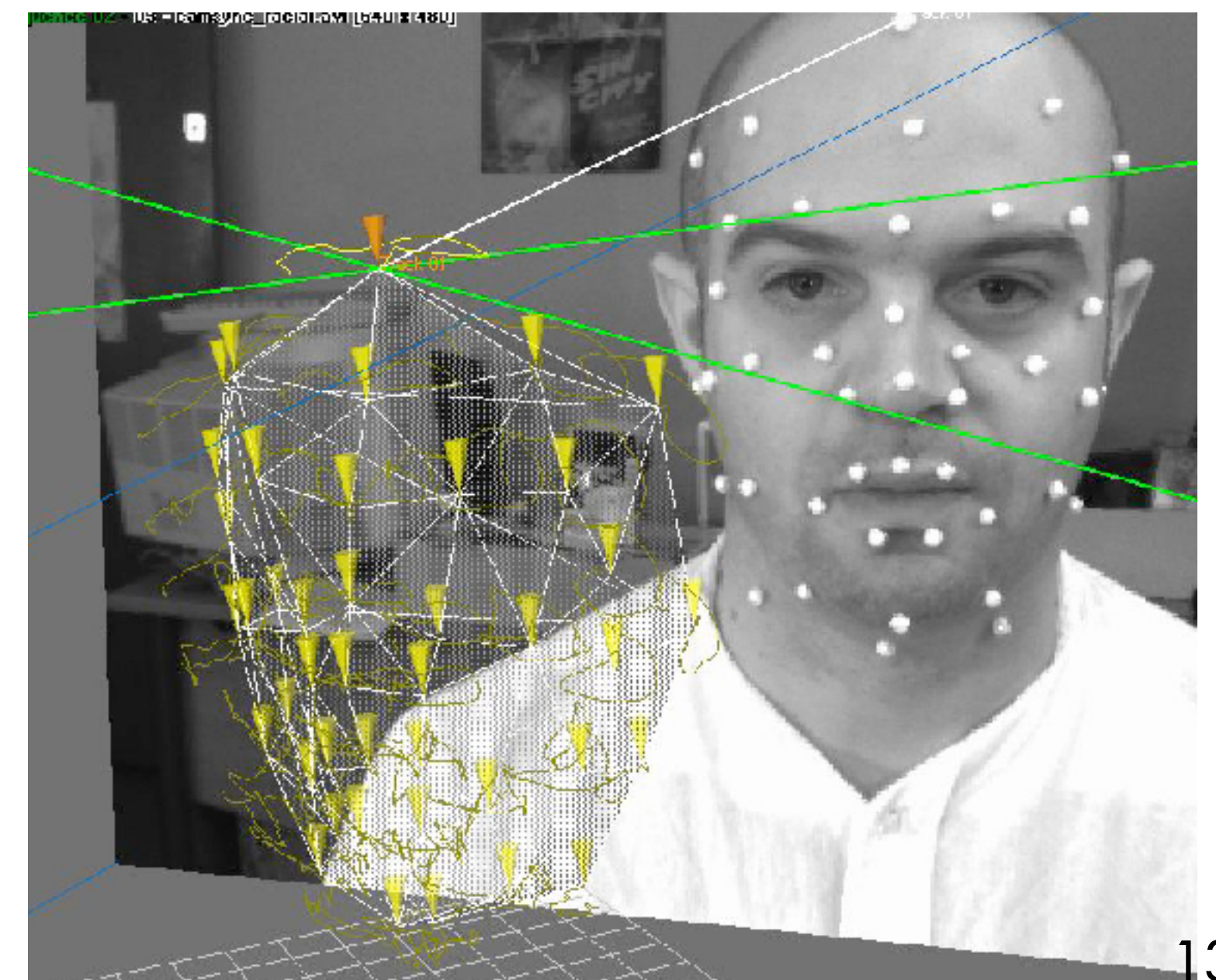
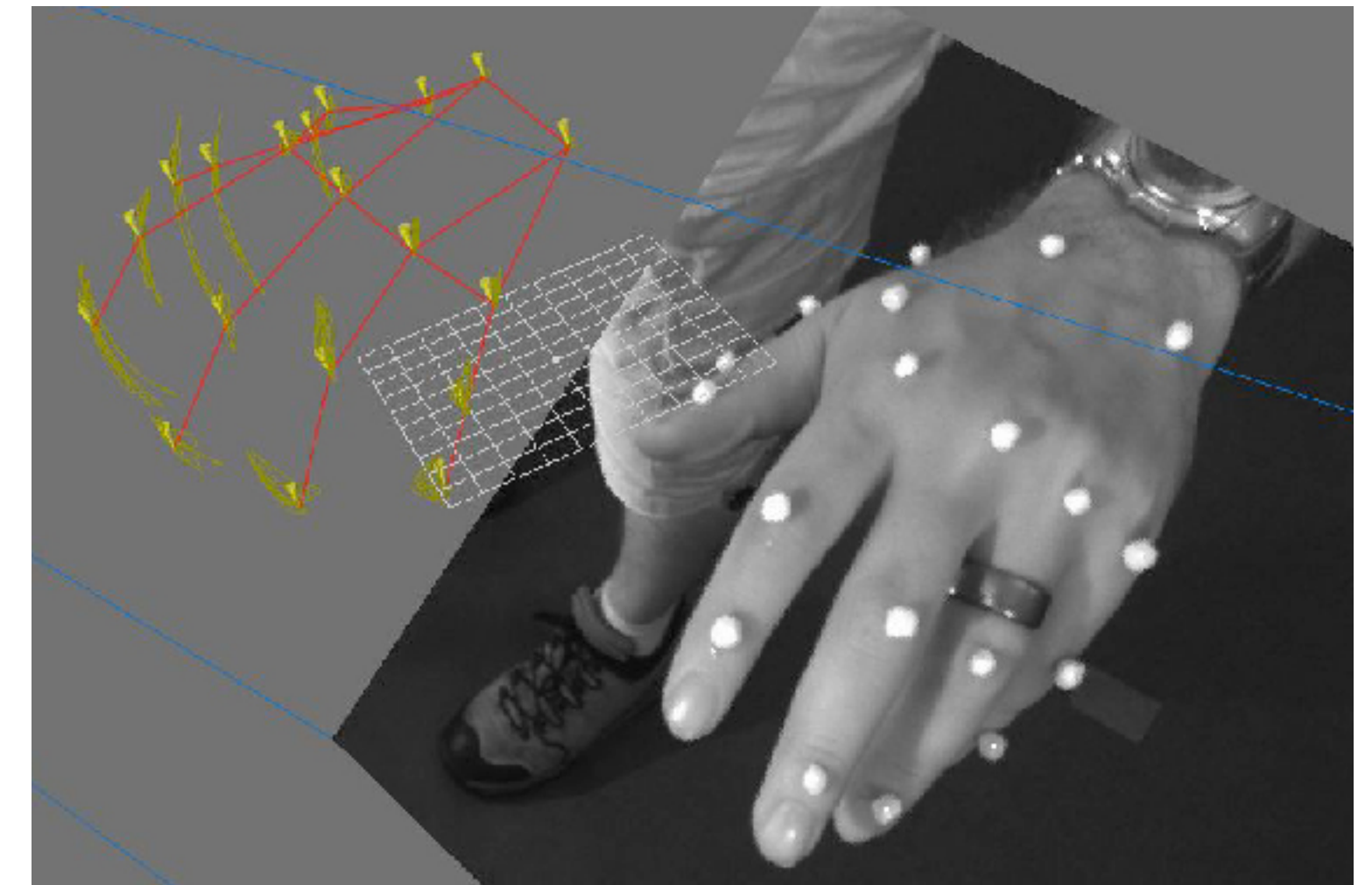
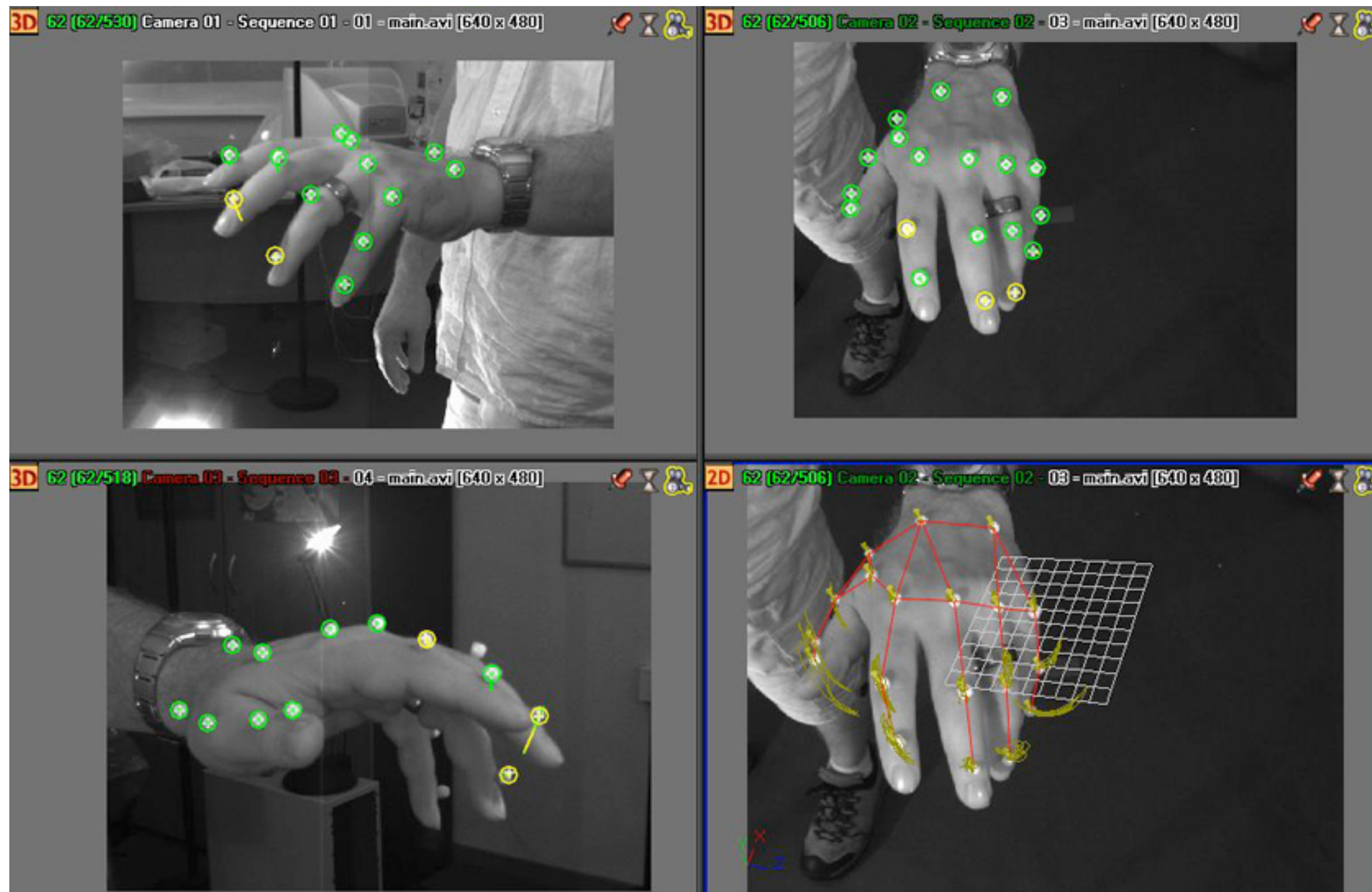
Motion Tracking



Motion Tracking



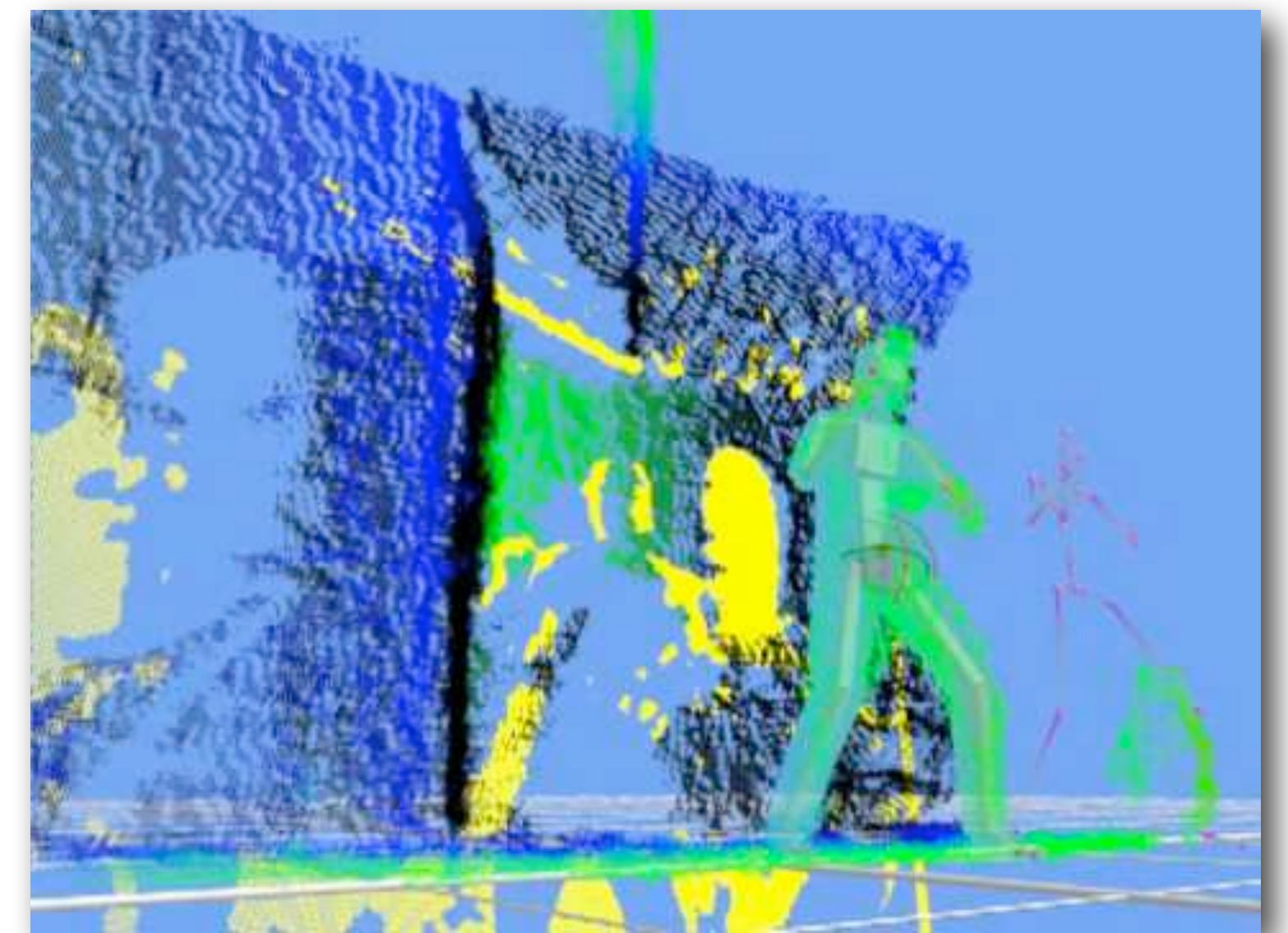
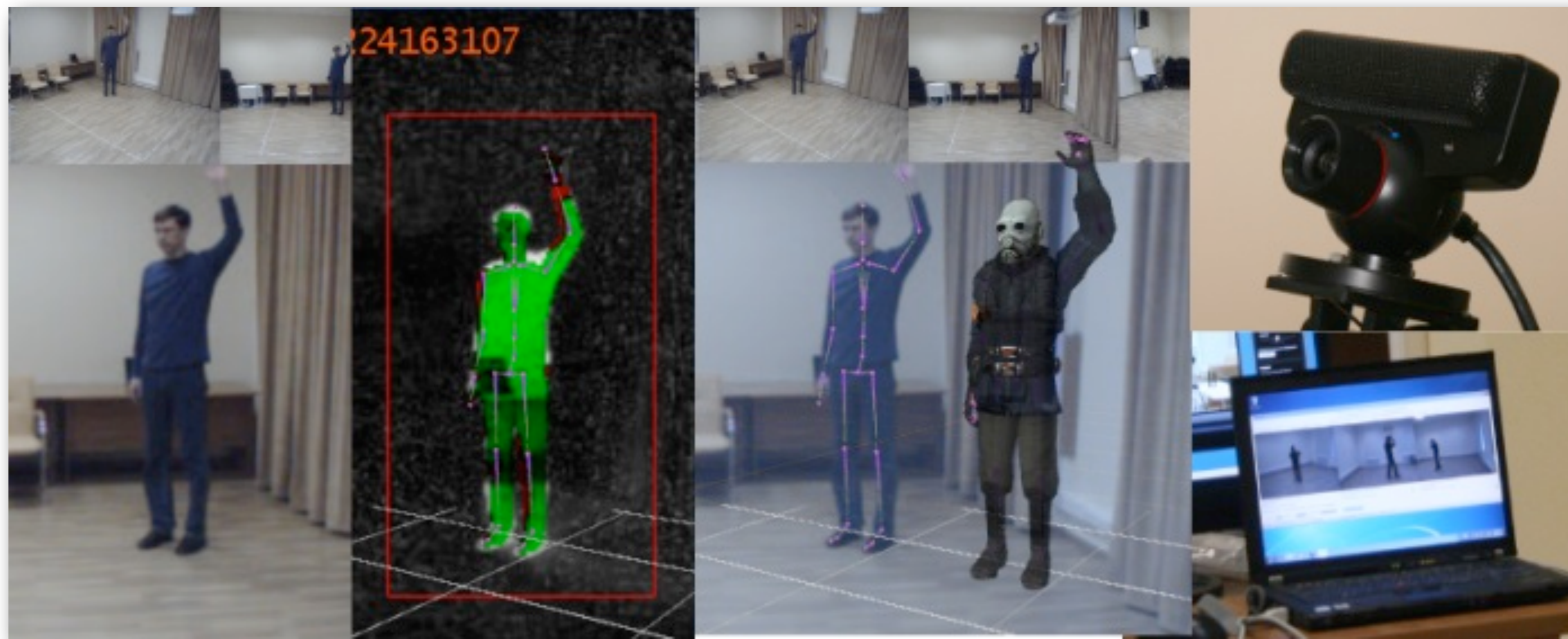
Hand/Face Tracking



Motion Capturing



IPISoft Kinect Motion Capture

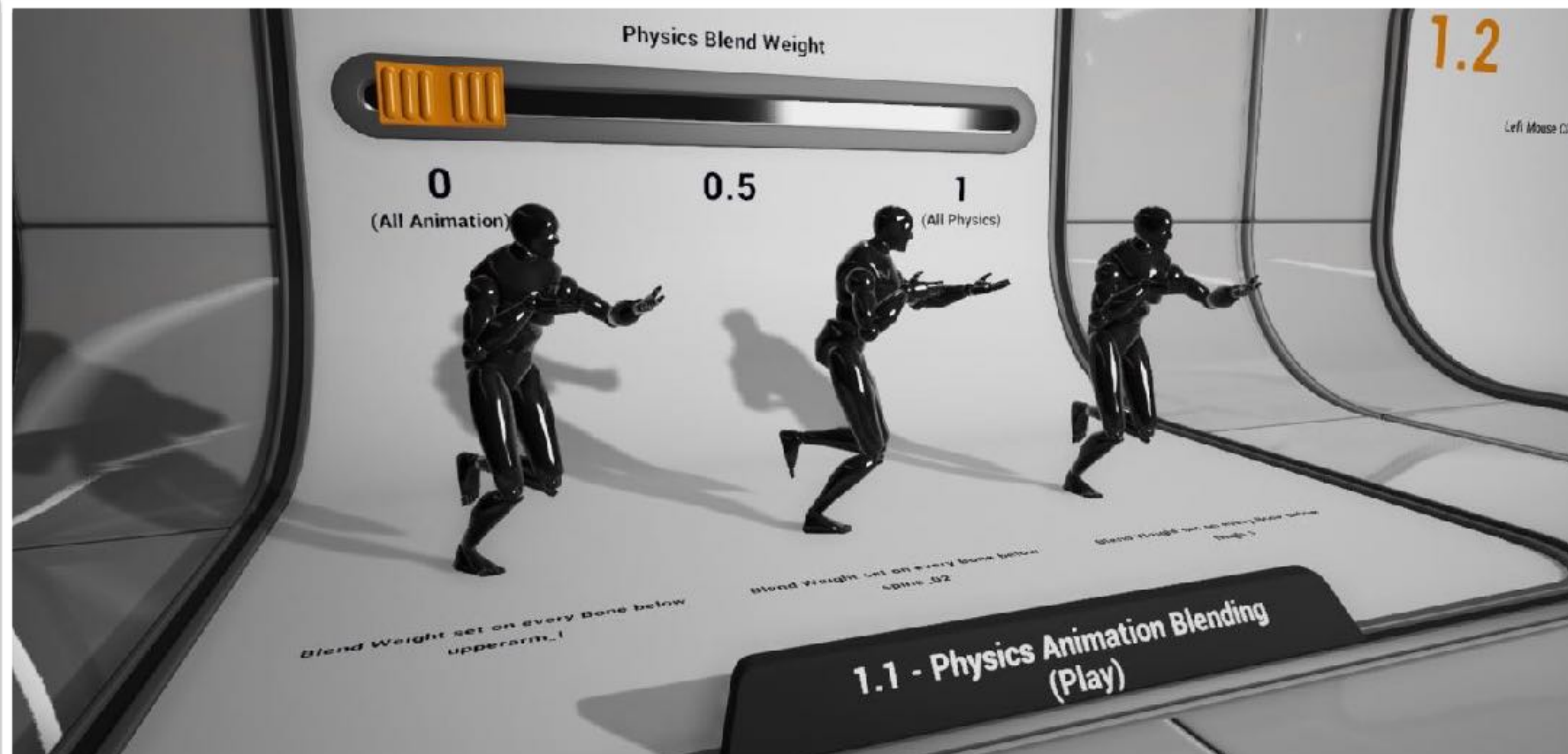


CMU Graphics Lab Motion Capture Database

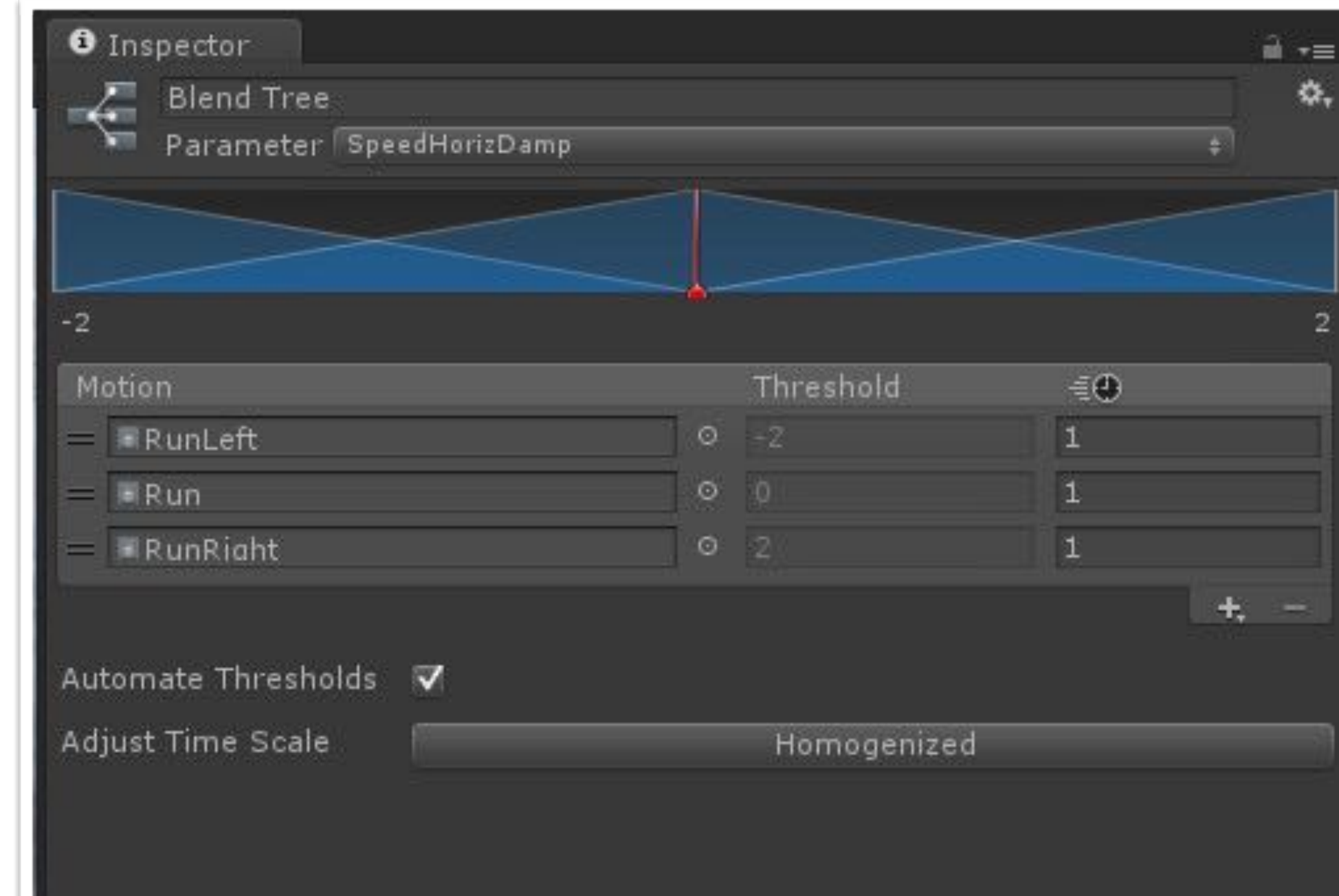


<http://mocap.cs.cmu.edu/>

Motion Blending

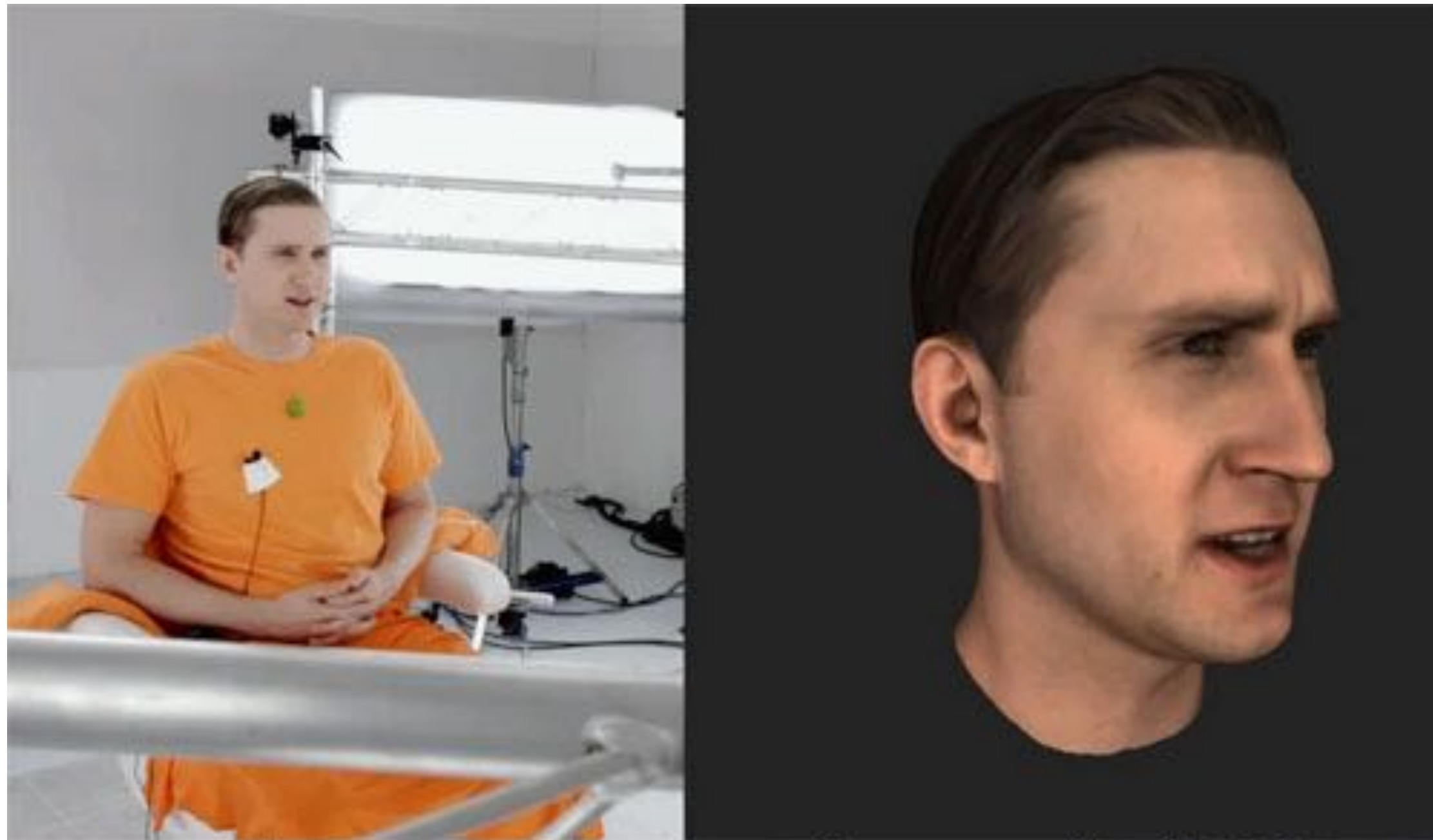


Unreal Engine



Unity 3D

Videogrammetrie



L.A. Noire

Prozedurale Animation



Jurassic Park: Trespasser (1998)



Instant Replay

Score: 63239
High Score: 1490957



Character
Altitude
008 ft
Airtime
-.- S

Vehicle
Altitude
005 ft
Speed
054 mph

Replay
Speed



0x

Festkörper-Animation
Turbo-Dismount



Weichkörper-Animation Octodad



Physikalische Animation



Cloth

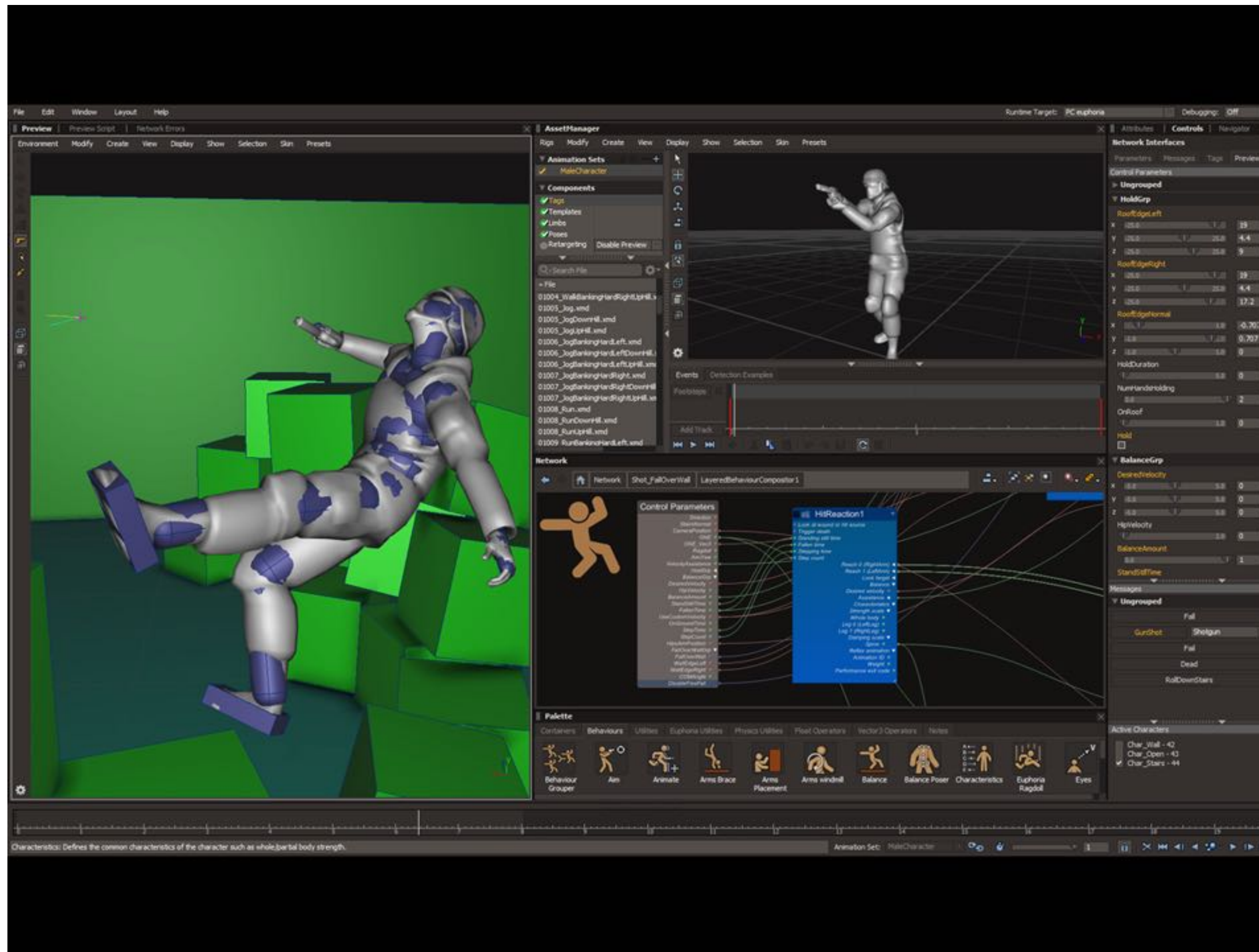
<https://www.youtube.com/watch?v=pQJlpMwyK5Q>



Hair

<https://www.youtube.com/watch?v=JNxvUg1lu0o>

Middleware



Morpheme / Euphoria

<https://www.youtube.com/watch?v=0Pm0Cvm0zdl>