

About MOCAP

Mocap (a.k.a. Motion Capture) is the recording of real life movements in a form a 3d animation software can read and interpret. To beginners, and to some business people, mocap seems like the single answer to all animation problems - it seems quick, easy, automatic and reliable. But that's not really true - mocap is slow (sometimes very slow), VERY tricky, and most cases quite unreliable. If you don't do it exactly right (positioning of the markers, calibrating the equipment, moving properly etc), you can expect to get weird, floaty movements that look totally unreal, and are full of mistakes. Even if the mocap-actor is good, he/she might still make small mistakes (or a move was overlooked, or the director changes his mind etc) so that the animator then has to fix it later, because it's too expensive to get the actor in again, and there's no guarantee he or she will get it right the 2nd time either.

But this "fixing" is a nightmare for the poor animator who has to do it - when you mocap you get a keyframe on every frame, for every x, y and z rotation channel for every joint (30 to 50 channels maybe) - say the sequence is 3 seconds long, at 30 frames a second = roughly 400 keyframes. Even if no big fixing is required this mess always has to be cleaned up, and this post-processing usually takes longer than the actual animation would have taken if it had been done by straight keyframe animation in the first place!

Of course, mocap is great for capturing performances that are unique to a particular individual, and also the very skilled, like Michael Jackson dancing or Jackie Chan fighting or Agassi playing tennis -- you get the idea.

A good, inexpensive, easy and reliable way to get the best of both worlds (keyframe animation and mocap) is to shoot a reference sequence with a cheap video camera on a tripod, then transfer it into your computer, put the sequence of images as a backdrop in your favorite animation program and use keyframe animation to get your movements as close as you wish to the reference.