

ABSTRACT

Abstract Motion capture, motion tracking, or mocap are terms used to describe the process of recording movement and translating the movement onto a digital model. Initially invented in Scotland, it is used in military, entertainment, sports, and medical applications. In filmmaking it refers to recording actions of human actors, and using that information to animate digital character models in 3D animation. When it includes face, fingers and hand, it is often referred to as performance capture. Optical systems utilize data captured from image sensors to triangulate the 3D position of a subject between one or more cameras calibrated to provide overlapping projections. Data acquisition is traditionally implemented using special markers attached to an actor; however, more recent systems are able to generate accurate data by tracking surface features identified dynamically for each particular subject. Tracking a large number of performers or expanding the capture area is accomplished by the addition of more cameras. The problem was how to create motion capture system that cheap but it can handle more 2 cameras. This project expected to solve that problem with epipolar tracking for efficiency and calibration based Matlab for accuracy.

Keywords: *motion capture , calibration , camera , optical marker, tracking 3D*