

BioFeedTrak

BioFeedTrak is a general purpose scripting program for designing and implementing biofeedback programs that can enable clinicians and patients to receive instantaneous audio feedback to kinematic movements.

BioFeedTrak is able to give real-time feedback in the form of sounds based on whether or not kinematic or kinetic variables fall within certain bounds during the performance of any type of physical task that is pre-defined by the user. Kinematic variables include position, velocity and acceleration of individual markers (up to 45 markers) placed on key anatomical points of interest. Included angle between three markers as well as the angle of inclination of a segment defined by two markers can be used to provide feedback. Kinetic data include horizontal and vertical forces, moment about the vertical axis, as well as the coordinates of the center of pressure with respect to the forceplates.

The program works in conjunction with a Motion Analysis system. The user sets up the variables to be monitored, determines the starting and ending parameters for each variable to be assessed, chooses the volume and frequency of the audio feedback, and starts the Real-Time system. The patient and clinician are able to work side by side to retrain areas of the body that need further optimization.

