Biomechanics Analysis: IST Integrates Polhemus LIBERTY™ with MotionMonitor™

Background
Innovative Sports Training (IST), based in Chicago, IL, provides complete solutions for 6 degree-of-freedom (6DOF) motion capture and integrated comprehensive analysis. MotionMonitor, IST’s software package, integrated with Polhemus LIBERTY, the fastest, most accurate, scalable electromagnetic tracker available, creates the finest advanced data acquisition and analysis system in the market place. The MotionMonitor, in combination with LIBERTY, provides the best set of tools for a quick and flexible setup, data collection and data analysis.

Product Integration
Once the LIBERTY is set-up, sensors (up to 16 available per LIBERTY system) are assigned to body segments. Various protocols can be used for tracking anatomical landmarks and defining local coordinate systems for each body segment. Once the subject/patient is setup, various user-defined parameters can be defined to control the manner in which the activity is recorded, i.e. using event markers and triggers to start or end data collection such that all activities are synchronized to one specific event. Once data has been recorded, the activity along with graphical displays of data can be played back immediately. All standard kinematic and kinetic data can be selected from drop-down menu items. In addition, the user can calculate data with the user-defined data formulas using any raw or processed data variable. Smoothing parameters such as a Butterworth filter can be applied uniquely to each sensor or data acquisition channel. Further enhanced functionalities for data reduction and exporting are also available.

Other hardware systems such as EMG, force plates, event markers, digital video, haptic devices, immersive displays and eye-tracking can be integrated as well for synchronous data collection and analysis along with the sensor data.
Why LIBERTY is the professional’s choice?
LIBERTY offers a quick and easy subject set-up and is a more economical system over traditional optical video systems. When line-of-sight could be an issue, the LIBERTY system is a strong component to the solution. LIBERTY is particularly valuable when time is of the essence, and researchers or clinicians need a system by which they can set-up their respective subjects or patients in minimal time. The LIBERTY system tracks all 6 degrees-of-freedom, which eliminates the set-up of multiple markers per body segment.

IST and Polhemus have built a strong relationship enabling the ability to provide a turn-key solution to meet the various needs of many applications for data acquisition and analysis. For more information on IST, email support@innsport.com or visit www.innsport.com. Polhemus provides a family of motion tracking products to accommodate various applications, for more information on LIBERTY or other Polhemus products, email sales@polhemus.com or visit www.polhemus.com.

Polhemus is a Good Manufacturing Practices (GMP) Contract Manufacturer under U.S. FDA Regulations. We are not a manufacturer of Medical Devices. Polhemus systems are not certified for medical or bio-medical use. Any references to medical or bio-medical use are examples of what medical companies have done with the Products after they have obtained all necessary or appropriate medical certifications. The end user/OEM/VAR must comply with all pertinent FDA/CE regulations pertaining to the development and sale of medical devices and all other regulatory requirements.