



THE UNIVERSITY OF SOUTHERN MISSISSIPPI.

The School of Kinesiology and Nutrition

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The School of Kinesiology and Nutrition is seeking to procure 16 Miquis Hybrid motion capture cameras, with their associated cables and hardware, to accurately record both traditional marker-based as well as novel markerless motion capture data. This information will be used to assess and analyze human movement related to injury prevention, as well as clinical populations, such as adults with metabolic syndrome, older individuals, and those with chronic disease.

The commodity requested best fits our needs within the School of Kinesiology and Nutrition's biomechanics labs for three reasons. First, these cameras are the only hybrid (marker and markerless capabilities) that are compatible with our existing data acquisition board (DAQ) and associated software; Qualisys Track Manager. This means that this hardware is the only markerless motion capture hardware that is compatible with all of the digital and analog equipment currently installed in our lab. Second, the Miquis Hybrid cameras are the only hybrid hybrid (marker and markerless capabilities) on the market. Therefore, the capacity for us to collect and analyze both marker-based and markerless human movement is greatly enhanced as we do not need to procure additional cameras for analysis. In fact, in order to replicate the functionality of these cameras with another brand, we would need to spend substantially more money to individually purchase both marker-based and markerless based cameras plus the necessary cabling, mounting hardware, and operational software. Purchasing these hybrid cameras greatly reduces the cost necessary for us to complete our funded research. Finally, these cameras feature the same sync pulse which enables cameras to overlap volumes and create the required multiple Zones for three-dimensional recording.

Qualisys is the sole manufacturer of these cameras, and therefore are not available for commercial sale by any other software manufacturer. Qualisys is the only company capable of offering their unique hybrid camera configurations and features. No other manufacturer uses Qualisys' proprietary patented technology.

The department considers the quoted cost reasonable due to the profound benefits that are provided exclusively by this system.

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