

Odyssey Real-Time Measurement System

The NOVA Award was presented to Odyssey for innovation in real-time position measurement for construction. Odyssey provides rapid, real-time, accurate field measurements in three dimensions, free of human error.



Gathering accurate 3-D field measurements for a construction project is time consuming, and it relies heavily on operators of exceptional skill to reduce error. Converting this data efficiently for use in a CAD system is equally complex and limited by the compatibility of the measuring system and the CAD system.



The Odyssey Real-Time Measurement System provides a model for a dramatic advance in the accuracy, usefulness, and rapid collection of spatial measurements, and it greatly reduces the human factor in data collection.

An Odyssey System includes two or more portable infrared-laser transmitters and a receiver attached to a hand-held CAD readout (computer for data collection and retrieval). The receiver is a rod with attached optics. As the tip of the rod is moved about, its position is constantly updated by triangulation with the laser transmitters and displayed on the attached CAD readout.

The real-time positioning of the receiver allows the operator to move efficiently about a site, quickly locating and marking key positions in all three dimensions on the attached CAD unit. Developed by the members of the Consortium for Advanced Positioning Systems (CAPS), Odyssey enables CAD-based dimensioning, layout, and modeling to be performed directly in the field.

The flexibility and accuracy of the Odyssey System are especially helpful in establishing accurate positions for equipment, piping, and structural members inside a building, where traditional methods are limited by restricted access and poor sight lines.

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