

Hand-Held Body Scanning Concept Adds a New Dimension to the Process of 3D Image Capture

Michael Boylan, Albert Charpentier, Bob Kutnick, Kent Worsnop
Unique Solutions Designs Ltd. / MeAlity, Dartmouth, NS, Canada

Abstract

Microprocessors and innovative sensor technology are rapidly converging into aspects of our modern day experiences and provide incredible value. With the ubiquity of smartphone and mobile computing platforms, consumers and retailers alike are doing more work and performing more tasks on mobile devices.

Technology breakthroughs have repeatedly shaped our world and technological advances in the retail setting are no exception. Consumers expect technology to assist with countless aspects of their shopping experiences and place a high value on smart filtering tools capable of product recommendations.

Unique Solutions recognizes these needs and is focused on "fit" for retail clothing for individual consumers to working with large uniform suppliers to size and fit a large workforce. To accomplish these objectives, Unique Solutions builds, deploys and services 3D holographic body scanners based on our millimeter wave scanning system to recommend great-fitting clothing to customers. Unique Solutions is actively leveraging specialized camera technology and pairing it with its successful millimeter wave technology to capture 3D body scans and taking scanning technology to a new level.

The retail floor space is a premium resource and current scanning technologies consist of large kiosks. Unique Solutions' latest development activities address these challenges and offer a solution taking the form of a handheld 3D body scanner.

The handheld version of the system provides the accuracy of the millimeter wave system and leverages camera technology to give the operator freedom to perform a scan and achieve high-quality results.

The addition of an imaging system offers exciting new measurement and customer service possibilities, as it will be used to augment the motion tracking of the scanner and support many aspects of the system. Additionally, the secondary sensor output will compliment the 3D data from the penetrating millimeter wave sensor used in the fitting algorithms. This novel and patent-pending handheld scanning concept will provide operators and customers with a unique presentation of the relationships between garments and the body, which is what customers value and expect from a state of the art fitting technology.