

## Real-Time 3D Content Creation of 3D Human Body Using a Handheld 3D Imager and/or Synchronized Sensors Platform

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### Abstract

Mantis Vision's "motion capable" 3D range-imaging technology was developed in mind to allow capturing 3D data of rapid dynamic scenes, based on a single Coded-Light pattern, which contains all the indexing information required by the triangulation algorithm. The Mantis Vision technology enables the capturing of high resolution 3D human Body in free motion, and can even be operated from moving platforms.

The technology was first implemented in a handheld product enabling the 3D acquisition of environments and objects in high resolution for Crime Scene Investigation (CSI) and for Intelligence Surveillance & Reconnaissance (ISR).

However, unlike the first product line, in which 3D modeling runs offline, this powerful coding and decoding innovation is implemented into a real time smart 3D camera/sensor based on embedded SW platform that streams 3D visual information from the imager platform to any type of visual 3D display and/or server platforms for visualization and analytics purposes. This real time platform has the capability to scan human body statically and dynamically from several viewing points.

The use of such technology can offer tremendous advantages to several application domains in the world of 3D body scanning, from a 3D gaming and animation tools to professional security smart cameras through medical invasive and minimal invasive applications.



*Fig. 1. 3D Handheld camera.*

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