MODEL 3D

The obvious solution for complete analysis of a movement

Model 3D is an optional module that allows the integration of dense and precise 3D targets of rigid objects and environments created with 3D scanners or CAD into TEMA/TrackEye 3D diagrams. The ability to use dense 3D targets with surface texture dramatically increases the understanding of any 3D or 6DOF analysis, but also adds more data. The 3D Model feature set lets you retrieve the 3D position of **any** point in a dense 3D target; real tracked points as well as virtual ones that were never tracked in the image sequences.

Scanner features

- Easy to use, intuitive, marker free
- Structured light
- Video frame rate 16 fps
- Data acquisition: 2M points/s
- 3D point accuracy of 100µm
- Working distance of 0.4-1m
- 3D accuracy of distance of 0,03% over 1m
- Export formats: OBJ, PLY, WRL, STL, AOP, ASCII, PTX, E57, XYZRGB
- Post-processing 40M triangles/1GB RAM
- No special equipment for calibration

3D Scanner

The 3D model scanner is a very light, fast and user friendly handheld 3D scanner with extreme good precision. The scanner provides both 3D geometry and surface texture in RGB colour. It is the ideal choice for quickly making an accurate and high resolution 3D model of medium sized objects like crash dummies, vehicles, engine parts or rockets.

Based on safe-to-use structured light scanning technology, the 3D scanner is an excellent all round solution for capturing objects of almost any kind, including objects with black and shiny surfaces. It features ease of use, speed and precision. From rapid prototyping to quality control, automotive to defence industry, medicine to ballistics, this is the perfect tool to enhance tracking analysis in TEMA or TrackEye with 3D visualization of scanned objects in 3D and 6DOF.

Complete solution

- 1 EVA Scanner
- 2 pc USB cables
- 1 pc battery pack
- 1 pc data cable
- 1 pc power supply
- 1 Laptop 32GB RAM

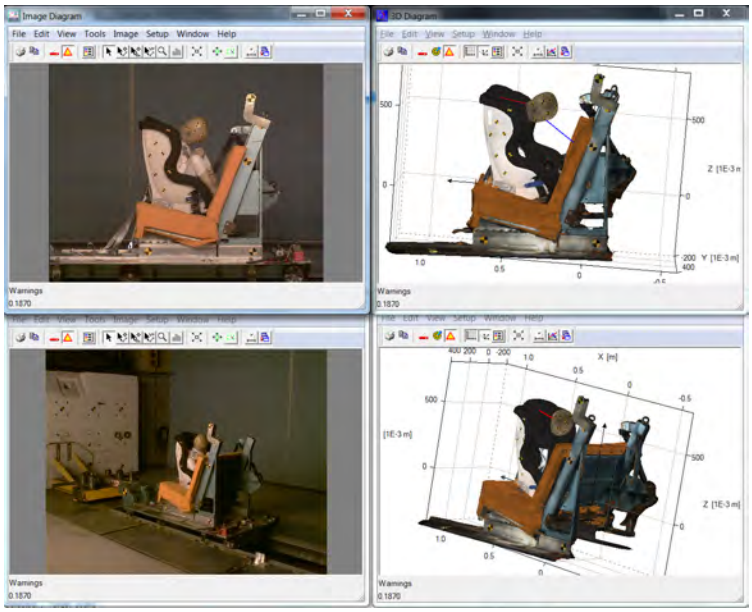
APPLICATION EXAMPLES

Automotive: Sled test

The 3D scanner combined with TEMA/TrackEye allows the complete analysis of dummy parts behaviour even when partially masked during crash tests or airbag deployment tests.

In addition, the shortest/longest distance between two 3D models (or one 3D model and a point) can now be computed as a function of time allowing in depth and accurate analysis like never before.

The full 6DOF behaviour of any 3D model can be visualized in 3D diagrams along with its environment for a complete understanding.



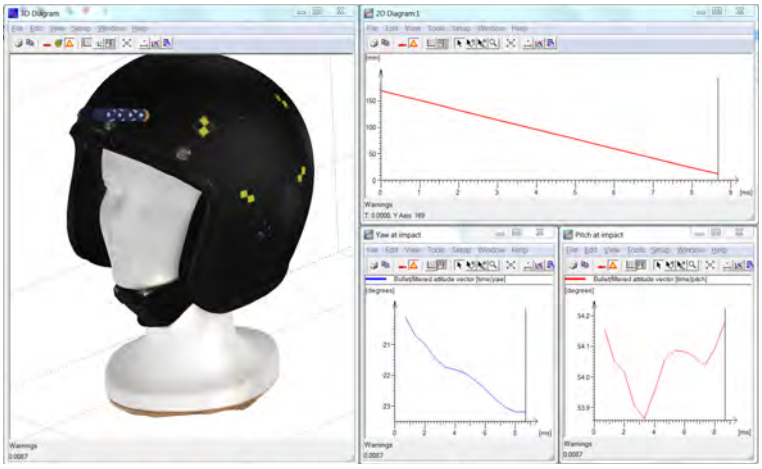
Defence: Store Release

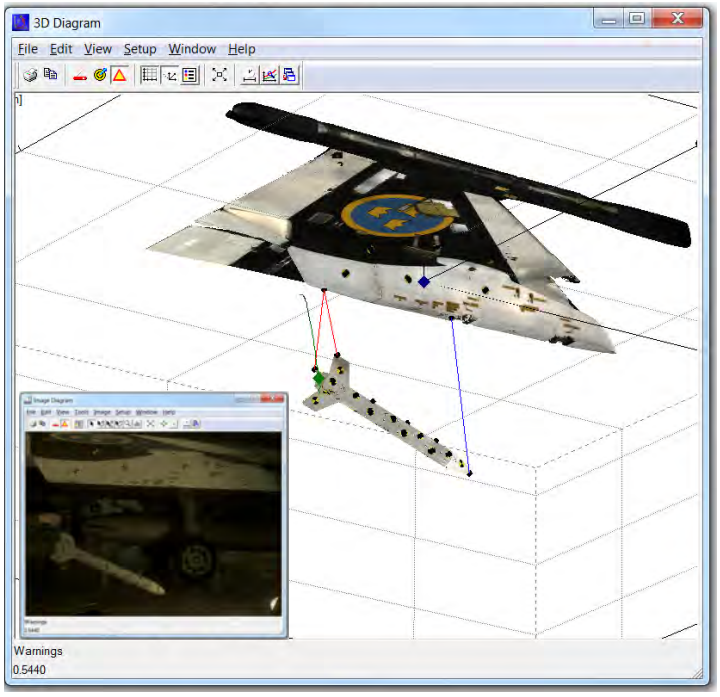
Being a real breakthrough in the field of motion analysis, by combining the 3D scanner technology and TrackEye metrology toolset, the user has now access to a complete and accurate 3D representation of the store and its environment.

The 3D coordinates of each point in the mesh from the scanned object can be displayed in the form of Points of Interest (POI). Any such 3D POI can be used as input parameter for advanced 3D analysis like shortest or longest distance between or within 3D targets providing a full understanding of the 6DOF behaviour of the phenomenon.

Ballistics: Angle at impact

The 3D scanner combined with TEMA/TrackEye allows the user to create 3D coordinates attached to the point of impact on any rigid target at 0.1mm resolution. Measuring the angles at impact of a projectile on a non-flat surface in this coordinate system becomes a simple formality and allows full understanding of ammunitions' behaviour.





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